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CLINICAL LECTURES.

EAR PRESENTATION.—PLEURISY IN CHILDREN.[1]

BY EDWARD P. DAVIS, M. D.,

VISITING OBSTETRICIAN TO THE PHILADELPHIA HOSPITAL, ETC.

Ear Presentation.

Gentlemen: This morning I will tell you of a case which was recently in the Maternity, and will give you a few practical ideas which it will be well for you to bear in mind. The woman was a multipara, and her pelvic measurements were as follows:

Between the spines	27	centimetres
" crests	27½	"
External diagonal	18	"
One of the pelvic diagonals	18	"
The other " "	20	"
Circumference of pelvis	82½	"

[1] Delivered in the Philadelphia Hospital.

The position of the child was diagnosticated as left occipito anterior; the heart sounds were 133 per minute, and the presumptive diagnosis was that the fetus was a male. The labor proceeded normally and the head descended into the pelvis. During an interval of relaxation between the pains, however, the head suddenly swung round, and the right ear of the fetus presented. This is a complication which, if not attended to, may lead to delay in the labor, impaction of the head, possibly to version, and still more rarely to craniotomy. In some cases this may be remedied by placing the patient upon that side towards which the occiput is presenting, elevating the hips and flexing the thighs, when spontaneous rotation may occur, and the head present normally. This failing, obstetrical instruments must be resorted to, one of the best being the antisepticized hand of the obstetrician. Dr. Strengel, the resident, immediately inserted his hand, pushing up the forehead and pulling down the occiput, and the labor proceeded normally to delivery.

Pleurisy in Children.

I will now speak to you upon the subject of pleurisy in children. Owing to the inclemency of the weather I am unable to bring before you the child whose case I present. Pleurisy in children is not rare. This statement was controverted years ago when it was thought that pleurisy was limited to the adult age. Children not only can have pleurisy but do have it about as frequently as adults. The difficulty, however, consists in making a correct diagnosis, and often the condition is overlooked. The disease in children arises from the same causes as those which produces it in adults. Thus, we may have an infectious pleurisy, due to a micrococcus of some sort; then again, it may arise as an inflammation, the result of a caries of a rib, or as a complication of tubercular infection; or it may be associated with pneumonia or broncho-pneumonia. It may further follow one of the exanthematous diseases, or occur during the stage of convalescence after rheumatism.

The diagnosis is obscured by the fact that the child will not accurately locate the pain. Most pains are referred by children, either to the head or to the abdomen. Then a physical examination will give us less definite information in children than in adults. Still, percussion is a valuable aid in forming a diagnosis. The child may show an elevation of temperature, 102° or 103°, a rapid pulse, rapid respiration, and cough. If it be an infant it cries when it coughs, and it cries because it coughs. This shows that there is pain of an acute character caused by the movement of the respiratory apparatus. In percussion we may get some slight dulness at the base from the beginning effusion. Auscultation reveals vesicular respiration over both sides, but diminished over the diseased side, and exaggerated over the sound side, and somewhat bronchial in character. At the apices, particularly of the diseased lung, we get bronchial breathing associated with a tympanitic note, sometimes known as Skoda's tympany, and supposed to be due to a consolidation of the lung below. When we examine the child's chest, we are struck with one fact, and that is the presence of the line of empyema of necessity. This is the line an empyema will take if left to develop spontaneously, and this "necessity point" of empyema in children gives us a clue where to look for the first bulging of the chest. It is found more commonly in the anterior portion of the chest at the junction of the second and third ribs with the sternum. The first and second interspaces often bulge early. If we measure the chest from the spinal column to the centre of the sternum on each side we may find but little difference. Occasionally the diseased side will be smaller than the other if the disease be chronic, while, if the disease be acute and the amount of exudation large, it may be enlarged. Respiration may not be at all disturbed. Again, the physical sign in a child's chest in pleurisy changes marvelously from day to day. We may have dulness or percussion with bronchial breathing on one day, while on the next they will be absent. To avoid making any mistake in this matter we should hold the child for some moments in one position before percussing in order to allow the fluid to gravitate to the dependent side. There is nothing characteristic in the cough of pleurisy in children. The effusion may be serous, sero-fibrinous, or purulent. Occasionally caseation, decomposition of the pus and the formation of green matter with the ptomaines will occur. The resolution of a serous exudate is often very rapid. A serous exudate may at times give rise to a high temperature and lead us to suspect pus when it is not present. When a purulent effusion is present it may be marked by a low temperature. In time, however, it will give rise to symptoms of constitutional depression which should not be mistaken for anything else. We should always suspect this condition in cases presenting an irregular temperature followed in a few days by bulging of the chest. The actual test for the nature of the fluid is to be made by means of the hypodermic needle or the fine needle of an aspirator, the operation performed antiseptically. We may puncture the lung several times without doing any damage if the syringe is clean, the skin be well cleansed, and the thrust made quickly and deeply, and the piston of the syringe slowly withdrawn. In old cases the canula may be blocked by fibrinous masses, and no fluid escape. We should always put the fluid obtained under the microscope, and study carefully the characteristics of the bodies seen in the field. If the exudate be serous, all that we shall find will be some blood corpuscles, free epithelial cells and threads of fibrin. If it be purulent, we should notice the character of the pus cells, whether they be old and dead, or healthy and vigor-

ous. On the distinction between these points will often depend the question of the treatment.

It may be well to ask: What will nature do in these cases, if we do nothing? In the serous cases, infants can generally manage the disease themselves, and if they are in good condition, very little treatment is needed. The sero-purulent exudation, however, must have a different method of treatment. If left to nature, the pus will burrow into the mediastinal spaces, the pyogenic membrane will become greater in extent, hectic will occur, and the cavity be emptied by the spontaneous formation of fistulæ. Then, if the pleuritic exudate be complicated with pneumonia or tuberculosis, it will form and reform as new portions of the pleura become affected, it being simply a part of the main process.

A serous exudation needs some treatment in the beginning of the case. When such a condition exists there may be some displacement of the heart, and the child, as an adult, lies upon the diseased side. Thus, if it be a left-sided pleurisy, it will nurse from the right breast of the mother, and mothers will tell you that there must be something the matter with the left breast, because the child will not take it. As a matter of fact, the left pleura is more often affected, in the proportion of four to one. In treating a beginning pleurisy the first indication is to apply cups. If it be a strong, healthy patient, you may use the bleeding cups, but in the majority of cases the simple dry cup, with a rubber bulb attached, may be used with greater comfort, and as efficiently relieve the pain. We may then place the child in a tepid pack, by wringing some flannel out of tepid water, and wrapping it around the child from the suprasternal notch to the umbilicus. This will give relief and exercise a favorable influence upon the course of the disease. Antipyrin in small doses is the best sedative in most cases. As the disease goes on, if the effusion be serous, we may give diuretics, the simpler the better. The best is water in large amounts. The salts of potassium and sodium, especially the citrate of potassium, are of value. A good combination is digitalis, liquor ammonii acetatii, and nitre; this acts both as a febrifuge and diuretic. The child should be kept quiet in a warm bed, and the temperature of the room should be regulated. The bowels should be kept open, and liquid food administered.

If empyema exists, what then shall be done? This is a question which is often disputed, equally good authorities taking opposite views. It is not always necessary to open the chest; but it is necessary to get the pus out. The simplest rule is first to try to empty the chest by aspiration, but not to delay this effort, for the pus may begin to disintegrate, micrococci form in it, and a chronic abscess produced. A simple piston syringe may be used for the purpose of aspiration. This is merely an exaggerated hypodermic syringe with a series of needles of various sizes. If we happen not to have an aspirator, we may apply the principle of the syphon. A trocar and canula may be inserted, the trocar withdrawn and the end of a long rubber tube slipped over the canula. This must be filled with an antiseptic fluid up to the end of the canula. The end of the rubber is allowed to drop into a vessel and then the pus, if fluid, will begin to run out. Aspirators are many and numerous, and work largely on the principle of the piston and valve. In using an apparatus for emptying the chest, certain precautions are necessary. Great gentleness should be practiced, with gradual withdrawal of the fluid. If the chest be emptied rapidly, dyspnœa may be produced with collapse, and more rarely death. Then the injection of antiseptic fluids into the chest has produced death. Before the operation, the patient should have a little stimulus, such as whiskey or brandy and water. A reclining position should be adopted. It is rarely necessary to use an anæsthetic for the purpose of aspiration, and an anæsthetic would mark the symptoms of danger. If sudden pain, dyspnœa, and exaggerated cough occur: stop at once. Give an anodyne to relieve the cough. Upon the removal of the needle close the wound with adhesive plaster.

How often shall we aspirate? Twice and no more, according to the best authorities. After two aspirations, if the fluid reforms, we have reason to fear that the patient's condition will become that of a chronic suppuration. We must then institute permanent and thorough drainage. An incision must be made into the wall of the chest, and a rubber tube introduced into the pleural cavity and allowed to remain, cutting off an inch or two every day. There is a decided disadvantage in this, namely, the presence of the tube, which tends to irritate the part and to produce a permanent fistula between the lung and the pleura. The better operation is to open the

chest freely. This is done preferably in the eighth or ninth interspace in the axillary line, though some go as high as the fifth or sixth. The incision should be made at the upper border of the rib, the tip of the finger introduced and moved freely about to break up the adhesions. Then a small tube should be introduced and held in place by a stitch. If the pus is offensive and decomposed, irrigate the chest with an antiseptic fluid. Then apply an antiseptic dressing, and place the patient upon a stimulating and supporting diet. If resection of the ribs is resorted to, remember the position of the intercostal artery at the lower border of the rib. Cut down upon the centre of the bone, raise the periosteum and do a sub-periosteal operation; and the bone will form again. Resection has frequently been practiced on children. Three-quarters of an inch from one or two ribs may be removed to give sufficient room for drainage. In ordinary cases recovery is prompt. If performed late, when the periosteum of the ribs is diseased and tubercular affection has become grafted on the empyema, the prognosis is almost hopeless.

The case which I had intended to show you is that of a girl between two and three years old. Empyema followed whooping-cough and broncho-pneumonia. Aspiration was performed once, and between three and four ounces of pus was evacuated. Her temperature has not risen since, her general condition is excellent, and we hope that the empyema was circumscribed or loculated, and that recovery will be permanent. We shall incise and drain the pleural cavity thoroughly if further empyema occurs.

REOPENING AN ABDOMINAL WOUND; CHRONIC OVARITIS FOLLOWING SPECIFIC VAGINITIS; UTERINE HEMORRHAGE FROM PROBABLE ABORTION.[1]

BY E. E. MONTGOMERY, M. D.,

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Reopening Abdominal Wound.

Two weeks ago I operated upon a woman forty years old, suffering with a malignant growth of one ovary. As there were very extensive adhesions, which had to be torn up; a drainage-tube was introduced. The patient was very restless after the operation and in her movements the tube was displaced, so that it no longer drained the abdominal cavity, and was removed on the third day. The patient did well, however, until the end of a week, when there was an elevation of temperature, which continued in spite of methods taken to reduce it. Vaginal examination revealed a collection of fluid in the pelvis, and an attempt was made to open through the vagina; but feeling the sac give way internally while the manipulation was being made by the vagina, I made up my mind at once to reopen the wound. A foul collection of serum was found in the immediate vicinity of the ligated pedicle. This was sponged out; the cavity thoroughly irrigated, a drainage-tube introduced and the wound again closed. The drainage-tube was surrounded by rubber dam and the wound subsequently frequently flushed, without the necessity of disturbing the dressing. The wound was reopened on the twelfth day after the operation, the temperature had been high for five days, but now at the end of two weeks the patient is improving as rapidly as could be expected. (This patient subsequently entirely recovered.)

Chronic Ovaritis following Specific Vaginitis.

This woman is a domestic about eighteen years old. Her father and mother were healthy and died from unknown causes. She has had the ordinary diseases of childhood and was never rugged. Menstruation appeared when she was fifteen. A year and a half ago she had an attack of rheumatism for which she was treated in this house. She has suffered from an attack of vaginitis due to exposure to a specific virus. She has never been pregnant. She entered the house last fall complaining of pain in the left ovary, for which the organ was removed, after which all the distressing nervous symptoms of which she had complained, disappeared. Two months ago, the pain returned in the right ovary.

Thorough examination discloses absence of any growth upon the left side, as you would naturally expect from the history of the former laparotomy; but on the right side she is exceedingly sensitive, presenting an indication of either chronic hyperemia of the ovary, or ovaritis. This condition

[1] Delivered at the Philadelphia Hospital.

would explain her distress and neurasthenic appearance. In all cases presenting the subjective symptoms of this patient we would proceed to make a careful examination of the condition of the pelvic organs, and especially of the appendages to the uterus. This examination is made by the conjoined manipulation, introducing one or two fingers into the vagina, as the calibre of that canal will permit. In careful examination it is better to use the finger of the hand corresponding to the ovary to be examined; thus the left hand for the left ovary, and vice versa. The examination is not complete until the rectal touch has been practiced. Let me caution you not to pass the finger from the vagina into the rectum without cleansing, for in cases of vaginitis you are likely to carry the poison and set up a rectitis that may cause your patient great inconvenience. On the other hand the introduction of the finger into the vagina after removal from the rectum, without cleansing, will be likely to offend the sensibility of your patient so much as to lead her to dispense with your services. I have been told of the discharge of a physician for having wiped his fingers upon the patient's monveneris after a vaginal exploration.

The ovaritis in this patient is, without doubt, due to the specific vaginitis. The ovaritis was attended with severe pain, and was accompanied, partly from the pain, and partly from the reflex influence upon the surrounding organs, with a marked neurasthenia. During menstruation, her pain is very much lessened, because the flow decreases the ovarian congestion. Anemia is a marked symptom, in this case, and is usually so; the ovarian hyperemia leading to free loss of blood during menstruation favors this condition, on the other hand the anemia tends to increase the quantity of the flow.

The treatment is local and general. The former consists in counter-irritants to the region of the ovaries and to the surface of the uterus. Probably the best is the use of electricity: varying its use between the faradic current with a bi-polar electrode and the galvanic current with one electrode in the uterus. The general treatment consists mainly in building up her health by the proper use of tonics, rest, out-door exercise, and pleasant surroundings. The operation of laparotomy should be deferred as long as possible, unless it is evident that the tubes or ovaries contain pus, when every delay is but time lost.

Where the operation is done because of specific infection, it is better to remove the organs upon both sides, and where one organ is left because it seems comparatively healthy, it will soon be found to be the seat of a redevelopment of the disease leading the patient to be subjected to the necessity for another operation.

Uterine Hemorrhage: Probable Sequel of Abortion.

The next patient I show you is a woman with this history: She is thirty-one years old, and has been suffering for several weeks, and, as you see, she is very pale and anemic. Her father died from phthisis, her mother from heart disease. She had the ordinary diseases of childhood; began to menstruate in her thirteenth year, and continued regularly. She has had two children, both of whom were still-born. One month ago she had a chill, and lost she says three quarts of blood. Two weeks ago another chill occurred again with hemorrhage, and one week ago there was a pint of blood lost accompanied with a chill. The uterine cavity was then subjected to curetting. As this operation was done before her entrance we are ignorant of what light it threw upon the condition. No hemorrhage has taken place since.

What is the cause of the hemorrhage in this patient? This is a very important question, for upon its solution depends largely the treatment to which it will be wise to subject her.

Uterine hemorrhage may occur from a variety of conditions. As exuberant granulations upon a lacerated cervix; villous degeneration of the endometrium; uterine polypi or myomata epithelioma of cervix or body; products from incomplete abortion. It may also result from diseased conditions outside of the uterus, as cystic degeneration of the ovaries, or it may arise from systemic affections as chronic diseases of the heart and kidneys; as the result of infection of various poisons, as typhoid, malaria, etc.

She has a lacerated cervix, as there is only slight eversion and no exuberant granulations it is evident that this is not the cause. The uterus is of nearly normal size and in correct position, the ovaries are not found to present tenderness or other characteristics

of disease. Hence we can say that the hemorrhage is not a symptom in this case of polypi. Malignant degeneration of the uterus, myomata within its walls, or cystic diseases of the ovaries. That it is not due to disease of the heart, liver or kidneys is evident from the absence of any other symptoms of disease of those organs. We are led by the process of exclusion to the belief that this condition has arisen from one of two causes: either as a result of malaria, or from an incomplete abortion. Although there is nothing in the history of the patient to confirm the diagnosis of probable pregnancy, I am inclined to believe that the attempted expulsion of the products of conception were the cause of the repeated hemorrhages; could we know the character of the products obtained by curetting, we could probably be certain in our diagnosis. It is true, the hemorrhages were accompanied by chills, but these were irregular, occurring at long intervals, and the patient has shown no disposition to a return since the curetting.

This patient is an instructive one. She impresses upon us the extreme importance of carefully investigating each individual organ. If the physician had attributed to the laceration of the cervix the symptoms and performed the operation upon her the distressing condition of the patient would have become aggravated. Nor should we hastily resort to laparotomy. The proper procedure in hemorrhage from the uterus, where the physical signs afford no interpretation, would be the dilation of the uterus so that the finger may explore its cavity. If granulations are present the curette should be used, fibroids may be enucleated, and astringents applied, where it arises from endometritis. Where the uterus is free from disease, we must direct our treatment according to the knowledge derived from the investigation of other organs.

It should not be forgotten that hemorrhage may arise from the vagina following vaginitis or it may come from a caruncle of the urethra. This enumeration will impress upon you the importance of a general examination and of having a general knowledge of the practice of medicine, before entering upon the practice of a specialty.

—Five children were bitten by a vicious dog while returning from school near Fort Recovery, Ohio, Dec. 16. The newspapers say that all have since developed symptoms of hydrophobia.

COMMUNICATIONS.

SKIN-FLAP OPERATION FOR THE RADICAL CURE OF HERNIA.

BY W. A. HAWLEY, M. D.,

CRESTON, IOWA.

I have originated an operation for the radical cure of hernia, which, in five cases, has proved a success. I say that I have originated the operation, for the reason that I cannot find anything like it in the literature on the subject, and also because I am the only one, so far as I know, who has ever done the operation.

This operation I will call the "skin-flap operation." It is performed as follows: The hernia is reduced, and the parts are first washed with soap-suds and shaved, after which they are washed with an antiseptic solution. A portion of the skin over the external abdominal ring, inguinal canal, and internal ring, in the shape of a parallelogram two inches wide and about four inches long, is then denuded of its epithelial layer with a sharp curette. After the surface of the skin is denuded and the hair follicles and sweat glands are destroyed, leaving the surface raw, I remove a triangular piece of the whole thickness of the skin, above and below the ends of the denuded territory of

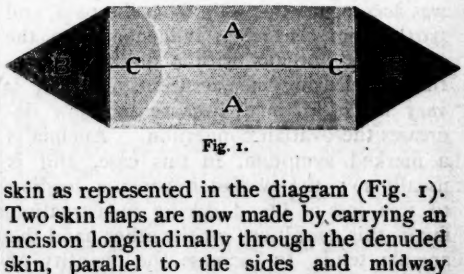

Fig. 1.

skin as represented in the diagram (Fig. 1). Two skin flaps are now made by carrying an incision longitudinally through the denuded skin, parallel to the sides and midway between them, from above downwards, directly over the internal ring, the inguinal canal and the external ring. The skin is next dissected up on both sides far enough to allow the skin to be drawn forward until the sides of each triangle meet.

Then a section is made through the external oblique, the internal oblique, and the transversalis muscles to the peritoneum, thus destroying the external ring, the canal, and the internal ring. The wound is then closed and the operation is completed by drawing the skin flaps forward and passing them down into the incision through the deeper

structures and under the muscles, and suturing them. The suturing is done with silver wire. Each piece of wire is armed at each end with a needle, and the needles are passed from within outwards, one on each side, going through the inverted denuded skin, the muscles, and the skin on the surface. Each suture is left incomplete until all the needles have been introduced and drawn through to the eye. Then, beginning with the upper suture and proceeding regularly downward, both needles of each suture are drawn through the tissues at the same time, and the wire is fastened. A drainage-tube may be placed in the lower angle of the wound, and the whole is dressed as in any other operation. In every case so far healing by first intention has occurred, leaving a solid retracted cicatrix; and to all appearances it is

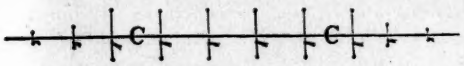

Fig. 2.

impossible for hernia ever to occur on the operated side.

I return to the abdominal cavity all tissue that is returnable and leave the sac in situ to increase the strength of the cicatrix, cutting through the sac and leaving as much of the sac tissue on one side as on the other, bound in, or hemmed in, by the skin flap. If I find it necessary to remove the sac or part of the omentum, I do so.

The distinctive feature of this operation consists in the method adopted to completely obliterate the external ring, the inguinal canal and the internal ring.

I have now operated upon five patients in this way and have had them under observation, after the operation, for from nine months to two years. To perform the denuding of the skin has been the most tedious part of the operation for me, as I have no battery, therefore I have used a sharp curette. A galvano-cautery would, perhaps, be the best thing to use.

It is interesting to note what becomes of the spermatic cord during and after the operation. In Gray's Anatomy it is stated that "in the male the spermatic artery and vas deference may be divided" in operations for hernia; and this is just what I do. Practically, I pay no particular attention to the cord, but cut right through the canal lengthwise, taking care not to injure the nerves. Ordinarily, I use only one set of sutures, namely, that which unites the line of the inverted skin surfaces, making the stitches on each side go through the skin which is turned under, as well as that which covers the abdomen on each side of the opening. In two of the operations I used a set of superficial sutures, placed in the intervals between the deep ones. In the three other cases only straps of adhesive plaster were needed to make the coaptation accurate; and union by first intention resulted in all five cases.

I have so far employed this operation only in cases in which an operation was necessitated by strangulation; but it may be capable of a wider application. I would not advise any operation where there is little danger of strangulation; but, if a hernia has been strangulated and successfully reduced, and is liable to strangulation at any time, I would not hesitate to operate; or, if a patient should insist upon an operation, after he had been informed of *all the dangers*, I would proceed to operate, and would expect a favorable result, with our present knowledge of antiseptic measures.

ANEURISM OF THE AORTA SIMULATING CARDIAC VALVULAR DISEASE.

BY GEORGE DOCK, M. D.,

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Aneurism in the beginning of the aorta, although rare, presents as a rule such a peculiar train of symptoms, that the narration even of isolated cases is not without value. In the present case, a slight variation from the usual site affected has given rise to a group of symptoms closely resembling those of a much more common class of diseases. While engaged with a ward class one day, I was so attracted by the appearance of a man just admitted as to make him the subject of immediate study before the class. The patient supported himself in an arm-chair; his countenance and attitude expressed intense drowsiness and exhaustion. His skin was cyanotic, the cervical veins dilated and pulsating, and his respirations frequent and shallow. His hands and face were puffy, and unbuttoned shoes revealed the thick ankles. The whole appearance, in short, indicated advanced cardiac insufficiency. The history then obtained was as follows:

M. N., 45 years old, barkeeper, born in

France. There is no history or evidence of syphilitic infection. He denies alcoholic excesses. The patient gives a history of unimpaired health up to four months before admission, when he began to cough, to feel short of breath, and to lose in weight. Soon after, his ankles began to swell. He was treated for phthisis, but later his physician told him his heart was affected, and prescribed digitalis. Growing worse in every way he came to St. Mary's Infirmary in Galveston.

The patient is of medium size, heavily built, and moderately emaciated. The skin is flabby, cyanotic, and slightly icteric, as are also the visible mucous membranes. Extreme anasarca exists, less marked in upper limbs and head. The thorax is well formed. The apex beat of the heart in sixth intercostal space in nipple line is exaggerated. There is a visible thrill all over the cardiac area, which is limited entirely to the diastole. The cardiac dulness begins above the fourth rib; extends to right edge of sternum and to nipple line. On auscultation a double murmur is heard. The first, synchronous with the apex beat, is loud, harsh, and rasping. It is heard equally well over apex, base, and aortic cartilage, and is also audible in the axilla and in the back. It is apparently the same murmur heard in the places named. Following this immediately, is another murmur, blowing, long and moderately loud, best heard above apex, but audible all over the heart area. It is synchronous with the thrill. The second sound at the aortic cartilage is present, though masked by the murmur. The pulmonary second sound is not markedly accentuated. The systolic murmur can be heard in the neck, though faintly. The radial pulse is 105, and quick, but of good tension. On the right side the pulmonary resonance ends in dulness in the fourth interspace in the nipple line, movable according to position; on the left in the seventh intercostal space in the axilla. Respiration shallow, accompanied by numerous loose râles, especially on the right side. The liver dulness extends two inches beyond the costal margin. The abdomen is somewhat distended, but no fluid can be detected in it. The tongue is flabby and thinly coated; there is loss of appetite, constipation, and a dull frontal headache; also scanty expectoration of frothy mucus. For several days shortness of breath has been so severe that patient could not lie down. The urine is scanty, and high-colored, specific gravity 1.030, and contains a small amount of albumin, no casts.

The result of this examination was not as satisfactory as I had expected. Though the suspicion of valvular disease seemed confirmed, the physical characteristics differed from usual in some particulars. The frequency of the heart beat made it difficult to time the murmurs and thrill, though they seemed to be as given above. The pulse seemed unusually strong, considering the evidences of insufficiency, but its character was attributed to digitalis. The suspicion of aortic disease was abandoned, and notwithstanding certain misgivings, the case was demonstrated repeatedly as one of double mitral disease, and was seen casually by various physicians without leading to any important change of opinion. Digitalis was pressed at first with great benefit. The œdema and cyanosis lessened, the dyspnœa was so slight that the patient could sleep lying down. The thrill became less marked; the murmurs continuing as before. Very soon, however, the drug seemed to have lost its effect. The dyspnœa again became so severe that aspiration was resorted to, and about a pint of sero-sanguinolent fluid removed from the right pleural cavity. This was of but little benefit, and, with increasing weakness of the circulation, death ensued. At the autopsy an unexpected condition was found. The autopsy notes bearing on the symptoms are as follows:

" . . . The right pleural cavity contains about twenty ounces of bloody serum and flakes of fibrin. The right lung is compressed, the lower and middle lobes collapsed, and non-crepitant. Their pleura is covered with a thin fibrinous coat; the tissue tough and bloodless at the periphery, but the area around the root infiltrated with blood. In the left pleural cavity there was a small amount of bloody serum, the lung slightly compressed, but crepitant throughout and œdematous. The bronchial mucous membrane is injected and covered with frothy mucus. The pericardium is adherent to the pleura on the left side, and closely adherent to the heart. The heart enlarged and both ventricles dilated. The left ventricle measures 12 cm. in length, its wall 18 mm. at 1 cm. below the ring. The aortic valves are slightly thickened but not retracted; aside from this the valves and endocardium are normal. The muscle shows no gross lesion. All the cavities contain mixed clots. The opened aorta measures 8

cm. at the insertions of the valves. The sinuses are not dilated. Beginning just above the valves is a diffuse dilatation, extending around two-thirds of the circumference of the aorta with the convexity of the vessel as its middle. It is from two to four centimeters wide and bounded above by a thick band which gives the aorta a constricted appearance, though the lumen is not diminished. The surface of the aorta in this part is covered with atheromatous scars and calcareous plates and shows the orifices of two saccular aneurisms. The first is just above the sinus of the right aortic cusp. Its shape and size are such that it fits the thumb for a distance of two centimeters. It projects to the right of the pulmonary artery, touching the upper part of the right ventricle. It is empty, and its walls are smooth and thin. The second is further to the left, in the concavity of the aorta, just above the common insertion of the posterior and left leaflets of the aortic valve and the left coronary artery. Its orifice measures four by three cm.; the lateral edges are sharp and rigid, the upper border is formed by part of the firm band mentioned above. In the widest part the sac measures six cm.; its depth is five cm. Its wrinkled walls are covered by a thin, white, fibrinous layer, and are marked by a longitudinal ridge in the posterior part, corresponding to the auricular septum. The relations of this aneurism were studied by filling it loosely with wool, opening the auricles and examining the several cavities. On the right side it encroaches on the auricle and the superior vena cava, so that the capacity of the auricle is lessened about one-third and the lumen of the vein reduced to a narrow slit. On the left, the anterior wall of the auricle is bulged back, forming a rounded prominence directly over the mitral valve and causing an actual obstruction. The branches of the pulmonary veins from the lower and middle lobes of the right lung cross over the tumor and are almost occluded by the displacement so caused." . . . The other organs, especially liver and kidneys, showed the changes common to obstructive disease in the heart. The kidneys in addition showed beginning arterial sclerosis.

The lesions found explain the clinical phenomena so clearly that comment is hardly necessary. In an incomplete search of the literature of aneurisms in the beginning of the aorta I have not been able to find reference to one in the concavity. Their usual seat is in the interior wall, or still more rarely above the posterior leaflet, with symptoms of obstruction of the pulmonary artery or superior vena cava. The difference of half an inch to the left is enough to produce the mitral symptoms and the obstruction to the pulmonary circulation, and indirectly the systemic symptoms. The larger aneurism was so placed as to allow considerable expansion without rupture into a neighboring cavity or vessel, for notwithstanding its size, the walls are strong. Although the absolute rarity of such a lesion may bring the conclusion that it is of little practical value, yet it conveys an important lesson in the value of minute examination even when the condition seems plain, and furnishes a remarkably good example of the simulation of disease.

THE ANATOMICAL RELATIONS OF LESIONS OF THE HEART AND THE KIDNEYS IN BRIGHT'S DISEASE.[1]

From the Study of Three Hundred Autopsies.

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In the present paper I give an account of my studies from three hundred autopsy records of Bright's disease.

I will limit myself chiefly to the consideration of hypertrophy and fatty metamorphosis of the heart as occurring in this disease. There are a number of other points of interest that may be gleaned from these records, but upon which I will not dwell now beyond stating general results. Some of the points gained from the analysis of my tables give results which are at variance with those obtained from the collective studies of cases of Bright's disease made by some authorities. The reason for this may be looked for, however, in the classification of the material, the direction of study, or the purpose for which any given class of cases had been collected, or sometimes selected. My studies are purely morphological, being made at the autopsy table and in the laboratory upon consecutive cases of Bright's disease as they occurred during a

[1] Read before the Association of American Physicians, 1889.

given space of time. They are unbiased; not being a clinician, I have no theories or hypotheses to follow out, and refrain from making any suggestions regarding the mechanism of the production of cardiac and renal changes, and for the present I will not go into the details of the etiological relations of these affections.

Of the three hundred autopsies upon cases of typical Bright's disease, one hundred and fifty were studied by myself *post-mortem*, and most of these also microscopically; in fact, the specimens from every case where the naked-eye appearance was not conclusive, were thus examined. The source of these one hundred and fifty autopsies is from the coroner's material of the city of Philadelphia, through the courtesy of Coroner S. H. Ashbridge, for whom, in conjunction with Dr. R. R. Stewart, I conduct all the autopsies of cases of sudden deaths or those unattended by physicians. Another source is furnished by private autopsies, which I frequently make at the request of physicians. All these cases occurred in a total of eleven hundred and seventy-two consecutive autopsies of adults, and were executed between September 1, 1888, and September 1, 1889. It will be seen from the tabulated results given below, that in general these cases are not unlike the hospital cases, which are not included in this series.

The other one hundred and fifty autopsies were taken from the *post-mortem* records of the Philadelphia Hospital (the large almshouse hospital of this city). I abstracted them with the aid of my assistant in this work, J. F. Spelman. They were all made on subjects of typical Bright's disease, mostly diagnosticated as such or studied during life, being selected from a total of thirteen hundred autopsies from the hospital records stated, covering a period of five years. Many of them had been executed under my supervision and that of Dr. E. O. Shakespeare, while in the rest the cases were clinically studied and the autopsies executed by the members of the hospital staff, which included Drs. Tyson, Bruen, Osler, Musser, Wilson, Henry, Curtin, and Walker. These hospital records, although not sufficiently detailed regarding the weight of the heart and kidneys, are accurate, and will serve our purpose.

Each series of cases is separate and distinct, no cases being duplicated; and each case is recorded separately and in detail in the second part of this paper.

In the preparation or collection of these records, Bright's disease was taken as the starting-point or basis. All cases of kidney affection other than Bright's disease, or those in which the disease did not present itself as fully established at the autopsy, and a few ill-recorded cases, were excluded. In the hospital and private cases the clinical diagnosis was paid attention to: an advantage which was not enjoyed in the coroner's cases; yet, even in the latter, sometimes the most truthful of histories were obtained under oath upon the witness stand, especially regarding habits of the deceased.

In the series of my own autopsies, which were made with the special purpose of presenting the results in these studies, the weights of the heart and of the kidney were taken carefully in nearly every instance, as stated in the records; likewise the condition of the *body* was noted, while its weight was approximately estimated. I believe this was in most cases an almost true estimate, being correct within the limits of a few pounds. Naturally the ability to do this requires practice.

The estimation of the weight of the body is all important as regards the question of the normal size of either heart or kidneys; because, while a heart weighing twelve ounces may be called hypertrophied in an individual of one hundred and twenty pounds bodily weight, it may be considered of normal weight in an individual weighing two hundred pounds. My figures of the approximate weight of the body are satisfactory for this purpose, because a mistake within a few pounds (of bodily weight) could be no definite mathematical factor; moreover, there are other more serious obstacles to the precision in calculating proportions, such as the condition of nutrition of the body and the contents of the alimentary canal.

In statistics relating to the weight of the heart found in the literature of Bright's disease these points, these facts—the importance of which is readily seen—have not been taken into consideration by any one, as far as I know. The same is true of the relation of the weight of the kidneys to the bodily weight in Bright's disease.

From the given weight of an organ a satisfactory estimate of its size can be made. I found the weight of organs to be a much safer criterion and more satisfactory than measurements, the latter being made by the different observers according to various

scales, methods, and ideas, which are often quite unintelligible and useless. The heart muscle especially varies in thickness according to the degree of contraction, the quantity of clotted blood, and the time which has elapsed since death. The plain statement of an experienced observer as to the condition of the cavities, the walls, and the approximate weight of the heart is more valuable than all the measurements that an inexperienced and over-zealous one will present with his figures.

From the present considerations I exclude amyloid disease of the kidney; in which there is a marked and nearly constant apparent absence of hypertrophy of the heart, although this belongs to the picture of Bright's disease. This is true as far as the small size or weight of the heart is concerned at time of death; but if it be considered that we usually meet with amyloid disease in scrofulous subjects, who invariably have congenitally small hearts, the conclusion that hypertrophy of the heart is rare in this affection will be found to be an error.

The small heart of the scrofulous is subject to hypertrophy as well as the heart of the normal individual; but when the former hypertrophies to double its original size, it may not appear any larger in volume than the latter, and when, in reality, enormously hypertrophied it may barely reach the size of what we ordinarily would call a slight hypertrophy. I made some studies upon the weight of the organs, in relation to the size of the body, in the scrofulous, according to the methods of Beneke and Thoma for establishing such weights, and paid especial attention to hypertrophy in amyloid disease. I shall present these observations on another occasion.

Cases of congenitally small kidneys and of senile atrophy were carefully excluded in Series A, these autopsies having all been executed or the organs personally studied by myself. I also excluded from the present records cyanotic induration of the kidneys, which, as is well known, is usually the consequence of cardiac disease, especially valvular. I may state here that my researches have fully convinced me that cyanotic induration of the kidney never terminates in Bright's disease, which is quite contrary to the opinion of some observers. I have reference to the long-standing passive hyperemia of the kidneys which results in cyanotic induration of these organs, with enlargement often to double their normal size, the kidneys being hard and firm and bluish-red in color.

The alcoholic cyanosis of the kidney, another affection analogous morphologically to the last named, but different only in the shape of the organs (the "pig-backed" kidney, which I first described and demonstrated before this Association, as reported in Vol. I of its *Transactions*), I also excluded. Alcoholic cyanosis is often associated with cardiac hypertrophy, but rarely with valvular disease. It is this affection which is often mistaken on the *post-mortem* table for, and recorded as acute Bright's disease. I doubt not that this lesion (the alcoholic kidney) represents the inflammatory form of Bright's disease of Grainger Stewart, which he records as being without albuminuria, without dropsy, and with large fatty livers, and which has crept now and then into the records of various observers, old and recent, as cases of acute Bright's disease. I also believe some of the subdivisions of the "pluralists" on Bright's disease, such as the "chronic hemorrhagic nephritis without dropsy of Weigert," to be identical with my alcholic cyanosis.

The late stage of the alcoholic cyanosis (the œdematous form), as met with upon the *post-mortem* table, in chronic drunkards who had been deprived for some time of alcoholic beverages, resembling much the large white kidney macroscopically, is another source of error. This lesion I have seldom seen to give rise to left-sided hypertrophy, though general hypertrophy is common.[1] Amyloid kidney also closely resembles and is often mistaken for the large white and the fatty and contracted kidney.

Such mistakes and the omission (to be referred to later) of some authors to separate the fatty and secondarily contracted kidney from the primarily contracted or granular kidney, cripple the statistics on the subject of hypertrophy of the heart quite decidedly.

In recording my cases I have adopted the rather crude and old-fashioned nomenclature for the various forms of Bright's disease, but one which I am sure will be readily comprehended; whereas did I use the proper technical terms, misunderstanding on

[1] It is remarkable how infrequent Bright's disease is in drunkards. I found that inflammatory kidney lesions generally occurred more frequently in the temperate than in the intemperate. Is it the constant excess of venous blood in alcoholic cyanosis of the kidneys that makes inflammatory changes less frequent, as it does in the right chambers of the heart?

the part of the reader as to exact form of Bright's disease meant, would be sometimes liable to occur.[1]

The classification adopted is as follows:

I. Acute parenchymatous nephritis (*Syn.:* catarrhal, tubular, desquamative, croupous, scarlatinal, febrile or glomerulo-nephritis, acute degeneration of the kidney, acute exudative nephritis, acute diffuse nephritis) I will term *acute Bright's disease.*

II. The early stage of the chronic parenchymatous nephritis (*Syn.:* same as above, qualified by "chronic") I will invariably refer to by the term, *large white kidney*, which well indicates the stage of the disease.

III. The late, or contracting stage of chronic parenchymatous nephritis (*Syn.:* diffuse nephritis, secondarily contracted kidney, obstructive nephritis, fatty kidney, chronic diffuse nephritis with exudation) I will designate by the term, *fatty and contracted kidney.*

IV. Chronic interstitial nephritis or primary contracted kidney (*Syn.:* granular, cirrhotic, or gouty kidney, renal cirrhosis, atrophic lithemic or toxemic nephritis, chronic diffuse nephritis without exudation, etc.) I will speak of as *red granular kidney;* which is an old and comprehensive name for this affection.

Among the most serious sins of nomenclature we find that the term diffuse nephritis is indifferently applied to both the fatty and contracted and the red granular kidney. The reasons for a separation of these two affections as distinct forms of Bright's disease are quite obvious; and I put myself strongly on the side of those who make it, viz., the dualists.[2]

For diagnostic purposes and for prognosis it is also quite essential that the *fatty or secondarily contracted kidney* should be differentiated from the *red granulur or primarily contracted kidney.* Clinically it is, I believe, well established, that in the former the onset of the disease may nearly always be traced to acute nephritis, or at least to the large white kidney; that it is liable to occur at all ages; that transitions from scarlatinal nephritis in the young are traced to the large white kidney of the adult, and to the fatty and contracted kidney of late life, while rarely to the very old; that dropsy is very common in the earlier stages; that polyuria is more rare, and albumin is seldom missed; in fact, the duration of the disease is very uncertain, a fatal termination being liable to occur at any time.

On the other hand, in the *red granular kidney*, which is common in gouty and rheumatic individuals, and is so often traced to disease of the genito-urinary tract, the initial stage is unknown, there being nothing to show that an acute inflammation of the kidney ever existed. It rarely occurs in the young,[1] being almost peculiar to middle or old age; it may be of lifelong duration; dropsy and presence of albumin are rare, and polyuria is prominent.

Polyuria in the fatty and contracted kidney, if it occurs at all, is late; the urine may be rich in albumin; whereas, in the ever-present copious flow in the red granular form, little or no albumin is present, as is well known. This I believe to be an important diagnostic point.

In my laboratory classes the urine examined is often from well-known clinical cases, and in many instances have I traced the albuminous (fatty and contracted kidney) and non-albuminous polyuria (red granular kidney) to the *post-mortem* table.

I may be permitted to introduce the following table relating to the more important anatomical and microscopical differences between the two affections referred to, because their separation is to a certain extent a point of issue in hypertrophy of the heart, and

[1] I am not considering here the histology of Bright's disease, hence it is unnecessary to review the anatomical and histological features of the various forms of this affection; but a statement of the array of synonyms may prevent misunderstanding.

[2] It is interesting to observe that Bright, Grainger Stewart, Dickinson, Johnson, and the English school are strictly "dualists," being reinforced by the great original German workers, Virchow, Traube, Senator, and Bartels; by Charcot and Cornil in France; and, in this country, perhaps most strongly by Tyson. The French are mostly "unicists" (*i. e.*, advocates of the eventual transition of the three parenchymatous forms of nephritis into the red granular kidney), in accordance with the views of such prominent Germans as Frerichs, Rosenstein, Cohnheim, and Bamberger, and, it appears, also with the views of some of the New York authorities on the subject. Of late years "pluralists" have arisen, chiefly among the Germans, including Wagner, Weigert, and even Senator, who are inclined to ascribe every form of Bright's disease to different and independent morbid processes and causes, and who place several complications of the morbus Brightii in the field as independent subdivisions of the disease.

[1] Eight cases in persons under 30 years of age will be found in my record. Histories of syphilis, malaria, and anemia in these cases.

ANALYSIS OF 300 CASES OF BRIGHT'S DISEASE (EXCLUSIVE OF AMYLOID DISEASE).

RESULTS OF PERSONAL OBSERVATIONS FROM CORONER'S AND PRIVATE AUTOPSIES. SERIES A.

RESULTS OF THE ANALYSIS OF THE AUTOPSY RECORDS OF THE PHILADELPHIA HOSPITAL. SERIES B.

	Parenchymatous Nephritis.								Interstitial Nephritis.		Total.		Parenchymatous Nephritis.								Interstitial Nephritis.		Total.		Grand Total.	
	Acute Bright's.		Large white.		Fatty and contracted.		Total.		Red granular.				Acute Bright's.		Large white.		Fatty and contracted.		Total of parenchymatous.		Red granular.				12 per cent. of all deaths.	
Number of cases of each form.	10		44		46		100		50		150		5		35		35		75		75		150		300	
Average age at time of death. .	26 years		34 years		45 years				52 years.				31 years		39 years		46 years				59 years					
	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.	No.	pr. ct.
Cause of death, uremia	0		13	30	19	41	32	32	15	30	47	31	0		9	26	11	31	20	27	30	40	50	33	97	32
œdema of lungs	0		9	20.5	5	11	14	14	13	26	27	18	2	40	5	14	4	11	11	15	7	9	18	12	45	15
cerebral apoplexy	0		0		6	13	6	6	8	16	14	9	0		0		1	3	1	1.5	5	7	6	4	20	6.5
pneumonia	1	10	5	11.5	2	4	8	8	1	2	9	6	2	40	2	6	3	9	7	9	6	8	13	9	22	7.5
pericarditis	0		8	18	8	15	16	16	12	24	28	18.5	0		1	3	2	6	3	4	4	5	7	4.5	35	11.5
hydropericardium	0		5	11.5	3	7	8	8	1	2	9	6	0		3	9	2	6	5	7	0		5	3	14	4.5
heart failure	0		3	7	3	7	6	6	2	4	8	5	0		2	6	5	14	7	9	4	5	11	7	19	6
sudden	0		2	4	3	7	5	5	8	16	13	9	0		2	6	2	6	4	5	5	7	9	6	22	7.5
Body emaciated	0		3	7	19	41	22	22	30	60	52	35	0		3	9	9	26	12	16	14	19	26	17	78	26
Dropsy, present	10	100	35	80	30	65	75	75	13	26	88	59	5	100	19	54	13	37	37	49.5	22	29	59	39.5	147	49
Dropsy, absent or not stated	0		9	20.5	16	35	25	25	37	74	62	41	0		16	46	22	63	38	51	53	71	91	61	153	51
Renal cysts, present	0		11	25	20	44	31	31	20	40	51	34	0		4	11	10	29	14	19	25	33	39	26	90	30
Renal cysts, absent	10	100	33	75	26	56	69	69	30	60	99	66	5	100	31	89	25	71	61	81	50	67	111	74	210	70
Hypertrophy of heart, left ventricle	0		12	27.5	20	44	32	32	33	66	100	67	1	20	4	11	9	26	14	19	23	31	87	58	187	62
Hypertrophy of heart, general	1	10	14	32	7	15	22	22	13	26			0		15	43	13	37	28	37	22	29				
Hypertrophy of heart, very slight or absent	9	90	18	41	19	41	46	46	4	8	50	33	4	80	16	46	13	37	33	44	30	40	63	42	113	38
Hypertrophy with valvular disease, left ventricle	0		3	7	3	7	6	6	14	28	42	28	0		12	34	11	31	23	31	29	39	52	35	94	31.5
Hypertrophy with valvular disease, general	0		7	16	5	11	12	12	10	20																
Hypertrophy without valvular disease, left ventricle	0		8	18	20	44	28	28	15	30	57	38	1	20	9	26	9	26	19	25	17	23	36	24	93	31
Hypertrophy without valvular disease, general	1	10	9	20.5	2	4	12	12	2	4																
Valvular disease without hypertrophy	4	40	4	9	4	8	12	12	4	8	16	11	1	20	3	9	3	9	7	9	12	16	19	13	35	11.5
Heart normal	5	50	14	32	12	26	31	31	3	6	34	23	3	60	11	31	12	34	26	35	17	23	43	29	77	26
Arterial changes, present	0		12	27.5	29	63	41	41	45	90	86	57	1	20	9	26	13	37	23	31	48	64	71	47	157	52
Arterial changes, absent	10	100	32	73	17	36	59	59	5	10	64	43	4	80	26	7	22	63	52	69	27	36	79	53	143	48
Renal arteries involved	0		3	7	4	8	7	7	41	82	48	32	. . .		. . .		. . .		. . .		. . .		. . .		. . .	
Dilatation of heart, present,	0		14	32	26	56	40	40	34	68	74	49	1	20	9	26	14	40	24	32	27	36	51	34	125	41.5
Dilatation of heart, absent, or very slight	10	100	30	68	20	44	60	60	16	32	76	50	4	80	26	7	21	60	51	68	48	64	99	66	175	58
Fatty metamorphosis heart muscle, present	0		8	18	15	33	23	23	25	50	48	32	1	20	5	14	8	23	14	19	17	23	31	20.5	79	26
Fatty metamorphosis heart muscle, absent, or not stated	10	100	36	82	31	67	77	77	25	50	102	68	4	80	30	86	27	77	61	81	58	77	119	79	221	73.5
The same without hypertrophy	0		2	4.5	9	20	11	11	5	10	16	11	1	20	2	6	3	9	6	8	14	19	20	13	36	12

fatty metamorphosis of the cardiac muscle.[1]

Difference between Fatty and Contracted and Red Granular Kidney:

Contraction of kidney secondary.	Contraction of kidney primary.
Size seldom below normal.	Size below normal, often reduced to one-half, or even one-fourth.
Capsule adherent only in places, seldom thickened. Surface lobulated, often smooth. Color pale, mottled or yellow.	Capsule adherent, thickened. Surface granular, rough. Color red or grayish-red.
Cysts usually large, and seldom numerous. Pelvis rarely dilated.	Cysts usually small-sized and numerous. Pelvis often dilated.
Arterial changes rare, or not pronounced.	Arterial changes (endarteritis, or periarteritis) almost invariably present.
Cortex often normal in size; atrophy very late.	Cortex always much atrophied.
Renal epithelium much swollen, desquamating freely, often in a state of fatty degeneration, but cells always visible. Compound granule cells present.	Renal epithelium never desquamating, though it may undergo fatty degeneration (necrosis), and become diminished in size and partly lost.
Tube casts epithelial, dark granular, and containing compound granule cells, and later fat globules.	Tube casts hyaline, pale granular, and waxy, but never containing epithelial cells, or any other.

Analysis of the Cases.

The three hundred autopsies from which I draw my conclusions (two series: A. coroner's and private cases, B. hospital cases) are, as stated, recorded in detail in the second part of this paper, which will be published in the volume of Transactions of this Association. I think it well to record them there, as future studies of the same by any one may reveal points of interest at present unconsidered. Each case has a reference either to my note-book, to the autopsy records of the Philadelphia Hospital, or to those of the Coroner, so that, should additional information be desired, it may be gained therefrom.

The large general table given below contains a summary of all the cases referred to in this paper, and gives the duration of life, the cause of death, the condition of the body, dropsy, cystic change of the kidney, and the prominent cardiac complications, such as hypertrophy, valvular disease, fatty metamorphosis, and dilatation of the heart, as well as the arterial changes in each form of Bright's disease, stating the number of cases. The figures expressing the percentage, side by side with the number of cases, facilitate comparison with other statistics.

Beside this I have compiled several special tables which give interesting data relating to hypertrophy of the heart under varying conditions, fatty metamorphosis of the cardiac walls, valvular disease and pericarditis, and the weight of the heart and kidneys in each of these affections.

I also present tables relating to age and sex, and further some interesting figures concerning the weight of the heart in relation to the weight of the body, and finally some data relating to the distribution of Bright's disease during the various periods of life.

References will be found in the records to arterial changes, and a summary of the various complications or concurrent affections of Bright's disease.

Conclusions.

From the above general table the following conclusions may be drawn:

Hypertrophy of the Heart.[1]

Hypertrophy of the heart in Bright's disease generally, occurred in all the cases tabulated in 62 per cent., of which 34 per cent. were left-sided and 28 per cent. were general hypertrophy. Hypertrophy was absent in only 38 per cent. of all cases.

[to be concluded.]

[1] If the classification and the definition of Bright's disease in its various forms were undisputed and a uniform nomenclature adhered to by all, then there would be no discrepancy in statistical results such as is seen in the literature of the subject. I would earnestly urge the adoption of a uniform nomenclature for the various forms of Bright's disease, and the abolition of some of the synonyms. Some of the latter are misleading, and I have met with instances where pathologists and clinical teachers would designate one and the same form of Bright's disease by entirely different names (without thinking that they were identical) and also, under a certain given name, affections entirely different from one another. Others delight in suggesting and using new names for the various forms, without giving synonyms when writing on the subject, and leaving the reader to conjecture from the description which form of the affection they really mean.

[1] To secure the figures regarding cardiac hypertrophy, each of the two series of cases is first considered separately, viz., by adding the total number of cases of parenchymatous and interstitial nephritis together and dividing by 150; the two results then being added and divided by two. For instance: General cardiac hypertrophy, *Coroner's and private cases:* In parenchymatous forms of nephritis, 22 cases; in interstitial nephritis, 13 cases; a total of 35 cases, which equals 23 per cent. *Hospital cases:* Parenchymatous forms of nephritis, 28 cases; interstitial nephritis, 22 cases; a total of 50 cases, which equals 33 per cent. By adding the two results (23 per cent. and 33 per cent.), and again dividing by two, 28 per cent. is obtained, which equals the percentage of general hypertrophy in the *total of cases.*

CREMATION.

WHAT IS THOUGHT OF IT BY PHYSICIANS.

INTERVIEWS WITH PHYSICIANS BY A REPRESENTATIVE OF THE MEDICAL AND SURGICAL REPORTER.

FIRST SERIES.

DR. WM. HUNT, on being visited, said that personally he has not much sentiment in regard to the disposal of the body after death, and had no choice between becoming an articulated skeleton, or being burned or buried. If anything, the former, as a condition of usefulness, would be most pleasant to him. Hygienically speaking, Dr. Hunt is of the firm opinion that cremation is the only right and proper method for the disposal of the dead. Of this he thinks there can be no doubt. The popular prejudice against cremation, he says, is most absurd. Whether the body is buried or burned, it is cremation all the same; the only difference being that in the one method the combustion is very slow, and in the other very rapid. Ultimately the body becomes dust, and it is merely a question of, perhaps, twenty odd years, or a few brief hours. Regarding the cremation of his family, he would be apt to follow their requests as to the disposal of their bodies, but would not for a moment hesitate to cremate them should they desire it. Dr. Hunt does not believe in graveyards, in visiting and mourning over the graves of our dead, or in covering them with flowers. He prefers to think of the dead as they have been when alive, and not associate their memory with the horror of death. He most heartily advocates the introduction of cremation into this country.

DR. WM. GOODELL is of the opinion that cremation should be obligatory and in the hands of the State authorities, and not in charge of speculators. He thinks it is the only right and lawful way to dispose of the dead. Dr. Goodell favors cremation for three principal reasons: the first being hygienic, the second sanitary, and the third æsthetic. It is his sincere wish that his body shall be cremated—to insure it against any possibility of desecration, if for no other reason. In these days, when towns and cities are growing so rapidly, who knows but what our remains may be dug up, in a few years hence, to make room for some church or other building. He would like to make provision for the incineration of his own remains. Dr. Goodell firmly believes that the ground is polluted by bodies buried in it, and to him the question of cremation is of vital importance. It should be in the hands of the State, under the direction of the Boards of Health, and it should be vigorously enforced. The main objection raised to cremation, viz., that it would render impossible the tracing of any poisons, is of but slight weight in contrast to the great hygienic value of the method.

DR. ROBERT P. HARRIS said he would rather be buried than cremated and thought he would also like his relatives to be interred in the old-fashioned way. There is still plenty of room for burial near cities, and he did not think it would cause much crowding. Regarding the value of cremation, he had never given it any thought, and would not like to give an opinion, other than that he considers it an unnecessary precaution.

DR. GEORGE STRAWBRIDGE said that, from a sanitary point of view, there is no question as to the superiority of cremation over burials. Of this, he claimed, there can be no doubt. It is unquestionably the only fit and hygienic method for the disposal of the dead. Sentimentally speaking, he confessed that he does not altogether favor the method. He had seen one crematory and was not pleasantly impressed with it. He did not like the idea of being baked in an oven, and it would be painful for him to think of this being done to the body of any of his family. On the other hand it is hard, also, to bury a loved one in the ground. The question viewed in this light is merely one of æsthetic taste. Dr. Strawbridge does not think that cremation will ever become popular in this country; the German element favors it, but not the American. He thinks that burials, if properly conducted, might be made to comply entirely with all principles of hygiene, but at present these laws are continually violated. Burials in damp or wet ground are certainly dangerous, and he understands that water is said to be often seen in the bottom of the open graves in a Roman Catholic cemetery of this city, which is situated on very low ground, and that the coffins are sometimes lowered into an inch or so of water.

DR. W. S. W. RUSCHENBERGER most heartily favors cremation, from both a hygienic and sentimental point of view. Regarding

the disposition of his own remains he is most philosophic, and, if the preference were given him, would prefer being sent, as an unknown body, to some school of medicine, there to be dissected. He claims that the remains of our families are of no possible use to us, and their keeping or preservation can do us no possible good. We cannot resole them like an old shoe. However, these bodies might, very possibly, do great harm. Cremation is the only means of obviating this possible, and even probable, evil. Dr. Ruschenberger then related the story of a sea-faring friend who had desired him to choose a burial place for him. The Doctor asked if he had any choice; to which his friend replied, "Not so long as it is on a hillside, for I have a dreadful fear of having my body waterlogged."

Dr. Charles Hermon Thomas favors cremation in a mild degree, both from a hygienic and sentimental point of view. Dr. Thomas said it was rather obnoxious to him to contemplate the fact that with their Schuylkill water Philadelphians are imbibing a vast amount of filtrations from their deceased friends in Laurel Hill; although, on the whole, it seems to agree with them fairly well. The cremations of Dr. Gross and others had impressed him most favorably. Personally he would as soon be cremated as otherwise, and would feel the same way regarding his family. It would be hard to thrust a loved one, although dead, into a glowing furnace; but it would be equally hard, if not harder, to lay that body in the cold, damp ground. Dr. Thomas does not think the ill effects of inhumation very serious; still serious results are possible and cremation would do away with these. While he would never start a crusade for cremation, he must say that he approves of it. Still, the *pros* for cremation are not sufficient to warrant its being made obligatory or a State matter; neither are the objections to burial sufficient to warrant its universal introduction.

Dr. Henry Hartshorne was seen at his Germantown residence and was found to be very favorably impressed with cremation. He heartily favors the entire destruction of the dead body. Its preservation, such as embalming or mummifying, is most distasteful to him. For it to be speedily reduced to its natural elements is pleasant and proper, both æsthetically and sentimentally. Our present methods of disposing the dead are far from what they should be. The open grave, the lowering of the casket, the weeping relatives, the rattle of the earth upon the coffin, are all most revolting. If incineration does away with the painful and unnecessary adjuncts of death it is sentimentally as well as hygienically far superior to inhumation.

Dr. T. H. Andrews said that, although when Demonstrator of Anatomy at the Jefferson Medical College he both advocated and practiced the cremation of the remains of all anatomical specimens, and had utilized the ashes in various ways, still, personally speaking, his sentiments are averse to cremation. To him it appeared akin to annihilation. After the body of a friend has been laid in the earth, there still seems something left with us; but if the body is burned, all seems lost. To him the cremation of the body of Dr. S. D. Gross was most painful; it is horrible to think that within four-and-twenty hours after the death of the great surgeon there was nothing left of him but a handful of ashes. Dr. Andrews never wants to be cremated, neither would he ever allow any of his family to be incinerated. He does not think the practice will ever become popular in this country.

Dr. Andrews then introduced our representative to

Dr. G. Milton Bradfield, who, after recovering from the misapprehension that the representative of the Reporter was the agent of a crematory, expounded the opinion that as long as the Latin races predominate in this country, cremation will will never be universal; but that when the Saxon element supervenes, the introduction will only be a matter of time.

Periscope.

Poisoning by Illuminating Gas.

In an article in the *Cincinnati Lancet-Clinic*, Dec. 7, 1889, Dr. J. C. Crossland, of Zanesville, Ohio, says it is the consensus of opinion among chemists and experimenters that carbon monoxide and the hydrocarbons are the poisonous constituents in illuminating gas. Analyses show that water gas contains from three to four times more of these factors than coal gas, and is therefore more dangerous. Our knowledge of the action of these poisons on the economy is incomplete. We know that carbon monoxide breaks up the oxyhemoglobin of the blood, forming with the hemoglobin a stable union,

thereby deoxidizing the blood. Some authorities claim that the effects of illuminating gas on the system are not due alone to the deoxidation of the blood, but that it has a narcotic action on the central nervous system.

He then describes a case under his care. The patient was a strong young woman who stopped at a hotel. She was assigned a room and immediately retired. At 5 A. M., the clerk went to her room to call her. On approaching her room he found the hall full of the odor of gas. On forcing the door the woman was found nearly dead, and the gas turned on.

Attempts at resuscitation were made by Drs. Draper and Brush, with stimulants, pure air, and the Faradic current; but little was accomplished until Dr. Crossland was called and administered hypodermic injections of a ten per cent. solution nitroglycerine. Fifteen minims of the nitroglycerine solution were injected into the epigastrium. The good effects of this on the heart action were perceived in about five minutes, though it soon became evident that several hours would elapse before the system could throw off the poison sufficiently for the patient to regain consciousness.

The treatment by hypodermic injections, chiefly of nitroglycerine, was continued at intervals varying from thirty minutes to two hours, according to the indications, and was supplemented with the use of the Faradic current.

Antiseptic Properties of Corrosive Sublimate in Minimal Quantities.

The powerful antiseptic properties of corrosive sublimate have only recently been fully appreciated, and experience has shown that equally positive results are obtainable with attenuated solutions as with dangerously strong ones.

Dr. François Scalji has recently been experimenting with very weak solutions of the sublimate and has found that when used at a temperature of 115° to 125° F., solutions of a strength of 1:10,000, 1:20,000, and even 1:50,000, and 1:100,000, are capable of exerting germicidal actions equal to those of solutions of 1:1000 or 1:5000 at a lower temperature.

Dr. Scalji's experiments, which are reported in the *Bulletin Médicale* October 2, 1889, were, briefly stated, as follows: First, he filled ten test tubes with fresh, normal urine. The first two of these were not treated; to the second pair a small quantity of a 1:1000 sublimate solution was added; to the third pair of tubes a similar quantity of a 1:5000 solution; to the fourth pair a 1:10,000, and to the last two, the same quantity of a 1:20,000 solution. Then one tube of each pair was kept at a temperature of from 59° to 77° F., and the others at a temperature from 115° to 125° F.

It was found that the two tubes to which no sublimate had been added soon began to undergo fermentation. The second pair, treated with the 1:1000 solution, remained completely sterile. With the third and fourth pair similar results were obtained. Finally, the last two tubes were examined, and it was found that in the tube kept at a normal temperature fermentation had been retarded for a few days, whilst the tube kept at a temperature of 115° to 125° remained sterile after the lapse of a month. The experiment was frequently repeated and always yielded the same results.

Similar experiments were then made with meat juice and milk, and the results were identical with those obtained with urine.

Finally, the bacillus of erysipelas on cultures of gelatine and blood serum were treated with weak solutions of sublimate, and it was observed that if the cultures were kept at a temperature of 150° or 125° sterilization was permanent and complete even when solutions of 1:50,000 or 1:100,000 had been employed; whereas if the cultures were kept at a normal temperature, solutions of the above strength merely retarded their development for a few days.

The clinical value of these experiments is very evident, for, if satisfactory antiseptic results are obtainable with a 1:100,000 solution of corrosive sublimate, neither surgeon nor obstetrician need be circumspect regarding its free use. The irritant or caustic action of the stronger solutions will be absent, and the danger of poisoning through absorption entirely removed.

Ammonia in Cocaine Poisoning.

A case of poisoning by a very moderate quantity of cocaine is reported by Dr. Golovkoff, in the Proceedings of the Caucasian Medical Society, where ammonia was used with good effect to restore the patient. The patient was a somewhat delicate woman, who was suffering severely from toothache.

The pain becoming unbearable, Dr. Golovkoff injected fifteen minims of a two per cent. solution of the hydrochlorate of cocaine under the skin of the left cheek, which gave relief for three or four hours, when the pain returned as acutely as ever. A second fifteen minims were injected, and in about five minutes' time the patient became restless, her pupils dilated, the surface of the skin became pale, the pulse and likewise the respiration became rapid, and shivering came on; the respiration soon ran up to 200 per minute, and was labored. A curious effect, too, was produced on the sounds of the heart, causing them to be audible at the distance of two paces from the patient. There was great pain over the cardiac region and back, together with a dread of death and convulsive movements of the limbs. There was some liquor ammoniæ at hand, and this the patient was given to smell and a few drops were given internally every five or ten minutes. Amyl nitrite was also employed, but the latter seemed to do more harm than good, while the ammonia soon brought the pulse and respiration, and indeed the general condition of the patient, into something more like their natural condition, so that in about a couple of hours she had quite recovered. Dr. Golovkoff remarks that the only case he has been able to find in medical literature where ammonia was used as an antidote in cocaine poisoning was one by Dr. Gooding, of Barbadoes, reported in *The Lancet* of 1888, vol. i, p. 394, and copied into the *Meditsinskoĕ Obozrênie*. (This was a case of a negress who had developed alarming symptoms after less than half a grain had been injected into the gum; she was treated by hypodermic injections of ether and ammonia.)—*Lancet*, Nov. 30, 1889.

Salpingostomy.

Dr. Skutsch has practiced a new gynecological operation. Since the introduction and general diffusion of salpingotomy as an operation recognized and justifiable, at least in prudently selected cases, many have suggested that at least an attempt might be made to save the diseased tube after opening its occluded cavity and freeing it from adhesions. Practice has shown that the danger of meddling with the affected parts in such a manner, and then closing the abdominal wound, is fraught with risk. Dr. Skutsch proceeds in a systematic manner to conservative ends, or, at least, did so in one case. The patient was sterile and 28 years old. She suffered from pelvic pains, and it is stated Dr. Skutsch diagnosticated obstruction and dilatation of both tubes. This diagnosis was confirmed by abdominal section. A hypodermic syringe was employed in order to puncture each tube and ascertain its contents. As clear yellow serum was drawn away the operator determined to save the tubes. An oval piece, about one square centimetre in size, was cut out of the outer end of each tube, and the mucous and serous coats united by fine silk sutures around the border of the hole thus formed. A sound was then easily passed from the tube into the uterine cavity on both sides. The patient made a good recovery, and was relieved of her pains, but a long after-history is not given. Dr. Skutsch calls this proceeding "salpingostomy." In some cases of pyosalpinx it would be advisable, he thinks, to sew the ends of the tubes to the abdominal wound, to open them and allow them to discharge pus externally. When the discharge ceased to be purulent the tubes might be freed from their artificial attachments and replaced in the pelvis. Dr. Skutsch's paper was read before the congress of the German Gynecological Society in June.—*British Medical Journal*, Nov. 30, 1889.

Misleading Stethoscopic Sounds.

In the *Med. Press and Circular*, Nov. 27, 1889, Mr. G. E. Greene, Medical Officer, of Wexford, says:

The following sources of error in diagnosis when using the stethoscope seem not to be sufficiently dwelt upon, if they are mentioned at all by clinical teachers. Both pupil and teacher frequently spend long periods in practically studying crepitation, etc., and seldom take into consideration that an artistic haired student occasionally generates those sounds in the vicinity of his own ear, whilst a hairy patient having nothing wrong with his lungs produces morbid sounds much better.

Pleuritic friction sounds are well simulated by the patient rhythmically applying his finger ends to his abdominal or other cuticle, while the physician is engaged in auscultation. Taking into consideration the numerous causes of, and necessities for scratching among the lower sections of society and the variability of timbre, rhythm, and intensity

produced according to the locality undergoing massage, the vigor, regularity or irregularity of its application, etc., it need not be wondered at that itchiness may be classed as one of the most frequent causes of phantom morbid stethoscopic sounds. Another source of error is the coming in contact with stethoscope of articles worn by patients, the friction of articles of clothing against each other, sounds produced by the bed when knelt upon, sounds caused by constrained position of the doctor's clothing, etc., in awkward positions whilst examining patients too feeble to be moved, noises arising in the room or next door, the imperceptible slipping of the stethoscope, and last, though by no means least important, bruits in auscultator's ears, the result of catarrh or organic disease.

A suitably constructed stethoscope of the binaural type would in most instances very materially diminish the chances of error in diagnosis, provided, of course, the user was well grounded in the sources of pseudo-morbid sounds.

A Defect in the U. S. Pharmacopœia.

In the *Pharmaceutical Era*, Dec., 1889, Mr. Paul L. Stangl, of Philadelphia, says: The United States Pharmacopœia is open to more than one objection, but none is so flagrant as the one to which I wish to call attention. I received a prescription, and finding the dose rather excessive, it being a very poisonous substance, I sent the prescription back to the physician to have it corrected or verified. The doctor being absent, I sent word for him to stop at the store on his route and was rewarded by his appearance shortly after. After stating the matter to him, it occurred to me to see just what the exact maximum dose is, and, as a pharmacist, naturally turned to the United States Pharmacopœia for information. Imagine my surprise on finding that the book, prepared especially to be the standard and guide by which the druggist is to conduct his establishment, lacked that most essential table, the maximal doses. As nearly every Pharmacopœia in the world has these tables, it was the more surprising to find them absent in the Pharmacopœia of this progressive country. This is of greater importance than it looks at first sight. If, for instance, a physician prescribes a poisonous dose, and the prescription comes into the hands of an ignorant and careless apothecary, he can compound it, and in case of poisoning can go free on two points which the law must allow. First, he can claim having followed the prescription and be irresponsible on that account; or, if he be questioned, if he did not know that the dose was poisonous, he can claim irresponsibility, because the U. S. P., the only book according to which he is compelled to make his preparations, does nowhere state the dose of this or any other remedy. On the other hand, the physician can go free on the same grounds, since his text-books vary the dose exceedingly. In fact, in six or eight different text-books on materia medica and therapeutics, used by professionals, which I examined, I found a range, for example, of tincture of aconite of from 5-8 to 20-25 drops as the highest safe single dose that can be given. In consequence a physician ought to depend either on the U. S. P. or his druggist, who in turn must rely on the U. S. P.

Recovery after Wounds and Operations.

Professor Nussbaum has found that a very good prognosis of the healing of surgical wounds can be obtained by examining the secretion from the surface during the first two or three days. If this be sanguinolent, prognosis is more or less bad. Care must be taken not to confound any slight after-bleeding with true sanguinolent secretion. The prognosis is only bad where the secretion from the whole surface of the wound is tinged with blood. Thus, when a day after a litholapaxy has been performed the urine is quite free from a reddish tinge the prognosis is good, or if two or three days after the amputation of a breast when the dressing is changed there is no general sanguinolent stain on the latter, but only, may be, a few little blood clots here and there, it is most likely that the wound will heal satisfactorily. Again, if the secretion becomes free from blood on the fourth or fifth day, the prognosis, though not quite so satisfactory as if there had been none at all after a few hours, it is still decidedly better than if it continues bloody up till the sixth or eighth day. In such a case the patient is sure, if he recovers at all, to be very slow about it. In phthisical persons and hard drinkers there is nearly always a great

tendency to a prolonged secretion of sanguinolent matter after wounds, and sometimes the tinge remains thoughout the healing process, which is in these cases very tedious. When the secretion on the first day is free from blood, it shows that the capillaries are closed, and therefore that the intracapillary pressure is normal. Again, it is evident that when the intracapillary pressure is low the endosmose and the exosmose between the vessels and the tissues cannot be taking place properly, and thus that the due healing of the wound cannot be expected to proceed as it ought.—*Lancet*, Nov. 30, 1889.

Value of Vaccination.

One of the most striking indications of the value of vaccination which has ever been given by a layman, is that which reached this country in the "Stanley Letters" of Nov. 25. Stanley writes: "The small-pox broke out among the Mayena and their followers, and the mortality was terrible. Our Zanzibaris escaped this pest, however, *owing to the vaccination they had undergone* on board the Madura."

Double Uterus and Vagina.

In the *Virginia Med. Monthly*, December, 1889, Dr. B. H. Brodnax, of Brodnax, Va., reports a case of double uterus and vagina coming under his observation. The subject was a negro woman, 40 years old, whom he delivered of the smallest child he ever saw, at full term. It measured eight inches long, was well-formed and alive, and died half an hour later. While removing the placenta, his finger caught in a loop in the posterior part of the vagina. Several days afterwards he examined the parts, finding a double vagina. Further examination, with sound, disclosed a second womb; the posterior one joined to the anterior, but with a perfect os and cervix, and depth of womb one and one-half inches. The woman had told Dr. Brodnax previously that she had menstruated regularly every month, whether pregnant or not, which caused her not to know when she conceived, or when her full time had come. This he had doubted.

The anterior uterus and vagina were of usual size but the second womb was only about two-thirds the size of the one that had been impregnated, and its vagina was not over a fourth of an inch in calibre. The two vaginæ were distinct throughout—they moving on one another when rubbed between the fingers. The examination was as critical and careful as could be made on a living subject. The woman had evidently never been impregnated in the posterior womb. She is still living, and the birth at which the discovery was made was the sixth.

Sea-water for Gonorrhœa.

In the *Brittsh Medical Journal*, Nov. 30, 1889, Mr. R. F. O'Brien, of Dover, says that during the past two months he has treated thirty-two cases of gonorrhœa by means of sea-water injections, the result being an average duration of disease under treatment of 8.87 days. Each case was kept under observation for about a week after the disease had quite disappeared, in order to ascertain if any return of the discharge occurred. Relapse occurred in one case only.

As to complications, one mild attack of cystitis occurred in a patient who had had a history of cystitis previous to his present attack of gonorrhœa.

The treatment was by sea-water injections, undiluted, seven or eight times during the twenty-four hours, each injection being retained for a few minutes. Latterly warm sea-water injections have been used.

The general treatment consisted in rest, dieting, saline aperients, avoidance of stimulants.

The results have been so satisfactory, as compared with those obtained by other methods of treatment, as to lead Mr. O'Brien to publish them, with a view to eliciting more extended trial. Should further experience confirm the above results, this would prove a method of treatment peculiarly suited to the naval and military services.

The advantages of the method are, that sea water combines an alkaline and antiseptic, with a tonic action on the mucous membrane. It is cheap and universal; for where sea water is not available "sea salt" would probably give nearly as good results. It also suggests itself for the treatment of other mucous membranes such as that of the vagina in vaginal leucorrhœa, etc. The addition of an astringent would probably give even better results, but nothing was used in the above cases other than sea water.

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NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.
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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

CREMATION AS VIEWED BY THE MEDICAL PROFESSION.

The subject of the mode of disposing of the human body after death is one of great importance to all men; but it is one in which medical men have a peculiar interest. To others it may be a matter of sentiment or of prejudice; but the medical man, from his familiarity with the processes of dissolution and his incessant regard for the influence of every controllable process upon the health of the community, must look upon it with special concern, and at the same time with special fitness for expressing an intelligent opinion in regard to it.

It is well known that the desirability of adopting cremation as a method of reducing the human body, after death, to its original gaseous and mineral elements has appeared clear to many physicians, and that from time to time desultory and occasional expressions of this opinion have appeared in medical and even in lay journals. But now the REPORTER presents, for the first time, we believe, to its readers the opinions of a considerable number of well-known physicians on this important subject. These opinions have been secured by direct application, in interviews by a member of its editorial staff, and are given as faithfully as possible.

The physicians who have met our proposition with courtesy deserve the thanks of their fellow-physicians, and we have no doubt their views will have great weight with the community. As will be seen from the interviews published in this number of the REPORTER—which are but a part of those already secured—the profession cannot be said to be unanimous; but there seems to be a strong preponderance in favor of cremation. This is largely founded—as might be expected—upon hygienic considerations. When the series begun in this number is completed, it is hoped that we shall have a full representation of the medical men of the country. We have not been able to publish in this issue the opinions of all the eminent physicians of this city whose views will be looked for with interest; but they will appear later. The interviewing will be followed up in other cities, and when the work is complete it is hoped that the sense of the medical profession in the United States will be fairly ascertained, and that this will furnish ground for some distinct opinion, which may guide the community in determining what practical steps—if any—are needed to make the the customs of the people of this country conform to the teachings of good sense as well as of good taste in the matter under consideration.

PHYSICIANS AND POLITICIANS.

The readers of the REPORTER will remember that about seven months ago the smooth current of medical affairs in the Philadelphia

Hospital was disturbed by an attempt by the Mayor of this city to force upon the Staff a physician of his personal choice, who had not received the endorsement of the Medical Board to which the nomination of candidates was delegated under the Civil Service Rules provided for such cases. At that time Dr. James W. White, President of the Board of Charities and Correction, refused to be the tool of the Mayor, and was summarily dismissed from office by him; and the REPORTER, on May 11, expressed editorially its opinion of this high-handed step.

It was then anticipated that the Mayor would follow up his attempt to wreak vengeance on Dr. James W. White by securing such modifications of the Civil Service Rules as would enable him before long to get rid of some members of the Visiting Staff of the Philadelphia Hospital who were obnoxious to him; and it is now reported that he intends to use the opportunity furnished by the annual election—at which it has been customary to re-elect the whole Staff, unless any of them declined a re-election—so as to have a new man chosen instead of Dr. J. William White, the son of Dr. James W. White.

It is to be hoped that this report is erroneous, and that no one of the present Staff will fail of re-election, unless he does not desire it, or there is clear proof of unfitness brought against him. If, however, it is attempted to displace Dr. J. William White, or any other competent and faithful member of the Staff, we believe no physician or surgeon who respects himself, or who has a true sense of professional honor will lend himself to this scheme by consenting to take a place made vacant so unjustly.

The occasion is one which may prove a critical one in the history of the profession in this city, and may be of far-reaching influence outside of it. It is an issue between physicians and politicians, and any physician who at this juncture mistakes its importance and lends himself to be the instrument of vindicating political or personal animosity, or who fails to stand by the fair interests of the profession as a class will deserve the severest censure.

We sincerely hope that the medical men of Philadelphia will be found united on this occasion; and that they will act so as to add to the reputation of the profession in this city and to strengthen the hands of their fellows elsewhere who may be so unfortunate as to find themselves in a similar trying situation.

THE HEART IN PREGNANCY.

The changes produced in the heart by the pregnant state are of great interest; and they have been studied especially by French and German writers. During his term as interne to the Paris Maternité, in 1826 and 1827, J. F. Larcher was struck by the frequency with which hypertrophy of the left ventricle was observed in women, from eighteen to thirty-five years of age, who had died for the most part of puerperal fever. He examined one hundred and thirty such women, and found that the increase in thickness of the ventricle amounted to a third or a fourth above normal. The right ventricle and the auricles were believed by Larcher to preserve their normal thickness. The investigations of Larcher excited great interest. Ducrest subsequently examined the hearts of one hundred women, from twenty to thirty years of age, who had died in confinement, and he was able to confirm the results obtained by his countryman. Following up the history of this question, we find that Larcher, in 1857, presented a memoir to the French Academy, in which he maintained that there was a normal hypertrophy of the heart during pregnancy. According to the excellent custom of the Academy, a committee was appointed to inquire into the statements made by Larcher. Investigations were undertaken at the instance of the committee by Ducrest, Zamboco, Béraud, and Blot, and they confirmed as completely as possible the results already given. Blot, for example, emptied the

hearts of blood and then had them weighed, thus showing that the hearts of pregnant and recently delivered women were heavier than the physiological average in women.

The results given above have not passed unquestioned. Gerhardt examined the area of præcordial dulness in four pregnant women, and upon the insufficient data furnished by these examinations, denied the occurrence of hypertrophy of the heart in pregnancy. He attributes the increase of præcordial dulness found in two of the four cases referred to, to an exaggerated upward curving of the diaphragm, as the result of which the heart is applied more closely to the thoracic wall. Friedreich takes the same view. The researches of Duroziez, however, would appear to establish beyond question the general correctness of Larcher's observations. Duroziez examined the præcordial area of one hundred and thirty-five women, either delivered or about to be delivered, and found the superficial dimensions of the heart to approach those of a man. He found also that the greater the number of pregnancies the greater the tendency of the heart to remain large. Ordinarily the heart diminishes to nearly the normal size within ten days after confinement, becoming smaller in those who do not suckle their infants; while suckling keeps up the hypertrophy of the heart.

It is evident that in examining the hearts of women to determine the changes which take place in a normal pregnancy, those cases should be eliminated in which the women have died of puerperal fever, or have had nephritis, because these diseases can themselves produce hypertrophy of the heart. When these precautions have been taken, the results obtained by different careful observers seem to indicate that hypertrophy of the left ventricle in pregnant women is not constant, and that it is frequently associated with dilatation. According to Fritsch, hypertrophy is not found, but only dilatation, which affects the least resistant parts of the heart—the right heart and especially the auricle. Löhlein takes substantially the same view. Macdonald believes that hypertrophy of the heart really exists, but that its frequency has been exaggerated; he admits that it is accompanied with a certain degree of dilatation of the different cavities of the heart.

It will be seen from what has been said that the earlier French writers were almost unanimous in maintaining that hypertrophy of the heart is a constant accompaniment of pregnancy; and that the German writers, on the other hand, were disposed either to ignore the occurrence of heart changes altogether, apart from puerperal fever and nephritis, or to attribute them to dilatation. The truth lies somewhere between these extreme views; in fact, the later French writers, such as Du Castel, Letulle, and Porak, have approximated somewhat to the views expressed by the German writers cited.

When one considers that in pregnancy the total volume of the blood is increased, and that it is at the same time diminished in nutritive power, it becomes evident that increased demands must be made upon the heart under circumstances calculated to weaken it. If, however, the woman starts with a good heart, and keeps up her nutrition throughout pregnancy, one can understand how hypertrophy may predominate over dilatation. In all probability the heart in most cases of normal pregnancy undergoes in a slight degree both hypertrophy and dilatation, the former affecting chiefly the left ventricle, and the latter the auricles and the right ventricle.

CORRECTION.

In the Clinical Lecture by Dr. Louis Starr, in the REPORTER, Dec. 7, 1889, page 623, 7th line from end of page, "50 per cent." should read "5 per cent." This is the strength of oleate of mercury ointment recommended by Dr. Starr for use in hydrocephalus.

—The influenza epidemic is spreading in Central and Southern Germany. A large number of cases are reported in Munich, Mayence, Cassel and Leipsic.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

TREATISE ON SURGERY. By T. HOLMES, M. A., Cantab., Consulting Surgeon to St. George's Hospital, etc. With 428 illustrations. 5th Edition. Edited by T. Pickering Pick, Surgeon to St. George's Hospital, etc. Large 8vo, pp. 1008. Philadelphia: Lea Brothers & Co., 1889. Price: cloth, $6; sheep, $7.

The most striking feature of this edition of Dr. Holmes's book is that we can discover in it no evidence of such revision as the date on the title-page would lead one to expect, or as would be creditable in 1889 to the authorship of Mr. Holmes or the editing of Mr. Pickering Pick. This defect is the more conspicuous and the more astonishing when we consider that no corner of the world is ignorant of the enormous changes which have taken place in regard to the theory and practice of surgery within the last five or ten years. The book before us contains a fair account of the antiseptic method of Lister, but in the body of the work there are statements which were true only before antiseptic surgery was fully developed. Thus, on page 57, we read that contused and lacerated wounds "always unite by second intention"—which is elsewhere described as involving pus-formation. Elsewhere we read "The union of compound fractures is by granulation," and that immediate union of the wound can generally be secured only "if the wound is a mere puncture." "If the wound is larger or the edges are lacerated or contused," he adds, "it will be useless to attempt to close it."

One of the most striking examples of the utter failure to revise this edition is to be found on page 116, where, in speaking of the treatment of hydrophobia, Pasteur is said to have reported his experiments "within the past few months," and his method is described as the inoculation of virus from a dog into a monkey and back again from the monkey into a dog! Again, Dr. Rouge's operation on the nose, published in 1873, is referred to (page 661) as "lately introduced."

In other portions of the book, where the question of abdominal section comes in, the opinions given are those of twenty years ago rather than of to-day! The old idea that opium is "indicated in all forms of traumatic peritonitis" has been abandoned by many of the most successful operators of the world; and for a general treatise, published in this year of grace, to advise the reader to "place reliance" only upon "opium, stimulants and fomentations," in cases of purulent peritonitis, is indeed remarkable; especially when no mention is made of abdominal section, with flushing and drainage, in the face of the favorable results which abound in literature.

No clear description of any one method for the radical cure of hernia is given in the work. In the author's opinion all operations, even the most recently devised, usually fail in their object unless assisted by a truss. In vaginal hysterectomy, tying off the broad ligaments by ligatures is alone advised; a method which, on account of its high mortality from hemorrhage, has been almost wholly displaced, the world over, by the clamp forceps, allowed to remain.

These are only examples—of which many more could be cited, if our space permitted—of the contrast between the teachings of this edition of Mr. Holmes's book and the present position of the science and art of surgery; and we find it difficult to understand how men of so much reputation as Mr. Holmes and Mr. Pick should appear to be responsible for such a seeming exhibit of ignorance or audacity.

AN EXPERIMENTAL STUDY IN THE DOMAIN OF HYPNOTISM. By DR. R. VON KRAFFT-EBING, Professor of Psychiatry and Nervous Diseases in the Royal University of Graz, Austria. Translated from the German by Charles G. Chaddock, M. D., Assistant Physician, Northern Michigan Asylum. 8vo, pp. viii, 129. New York and London: G. P. Putnam's Sons, 1889.

The present volume contains the history of a young woman who was extraordinarily suitable for the study of hypnotism. Her family history was extremely bad: the father was a drinker, and had died by suicide; the mother was sickly, and died paralyzed as the result of apoplexy; the mother's father shot himself while insane; a brother and sister of the patient died by suicide, and a sister was subject to *hysteria convulsiva*. The patient herself had a morbid impulse to suicide, which she abhorred; she also had attacks of hystero-epilepsy, and one attack of catalepsy. When sixteen or seventeen, while on a visit home from the convent where she was studying, she fell passionately in love, and surrendered herself sexually to her lover. She was then sent back to the convent, but escaped. Her subsequent history, up to the time when she came under Prof. Krafft's care, in October, 1887, is one of strange adventure. She committed thefts, sometimes apparently knowingly and sometimes while in a condition of self-induced hypnosis (autohypnosis), after coming out of which she would have no knowledge of her acts. Part of the time she wandered about disguised in male attire. Dr. Jendrássik, of Budapest, experimented with her in March, 1887; from him she escaped, and fled to Graz.

Professor Krafft's experiments with this pathological curiosity were very elaborate and covered a considerable period of time. The subject was absolutely under his control while hypnotized, falling in with all his suggestions and obeying no one else. She even attempted criminal acts at his suggestion. What is more remarkable is the demonstration that the patient could be made to perform acts, after awaking, under the impulse of suggestions made during the persistence of hypnosis. The curious influence of mind over matter was illustrated in the fact that the suggestion that the skin had been branded was followed by an inflammation which left the designated scar behind.

Professor Krafft's experiments are an interesting study in morbid psychology, and have a direct bearing upon certain medico-legal questions. Apart from this we do not see that anything new has been developed. The author believes that two facts have been established: (1) "that the phenomena of hypnotism are of a psycho-suggestive nature; (2) that post-hypnotic suggestion leads to the establishment of auto-hypnosis."

Dr. Chaddock, the translator, has done his work well, and the publishers have presented the book in a handsome form.

LITERARY NOTES.

The *Writer* (Boston) for December is filled with original contributions of interest and value to all who are engaged in literary work. Following a personal

sketch of Mrs. George Archibald are articles entitled "Duplicating Manuscripts," "The Opening Sentence," "'Don'ts' for Young Writers," "Needless Words." A new department, of great practical value, is entitled "The Use and Misuse of Words;" in it every-day questions of language are discussed briefly in a plain and common-sense way.

NOTES AND COMMENTS.

Italian Sausages.

The excitement caused throughout Italy by the detection of extensive frauds in the Bologna sausage manufacture is spreading. Other cities, notably Florence, are demanding an immediate inspection of the same articles of food as are vended in Italian warehouses. The public, says the *Nazione* of that city, are entitled to some such inquiry in their behalf as has just yielded such startling results in Bologna. Instead of the pig's flesh popularly supposed to form the main ingredient in the Italian sausage, horseflesh is that which is really used — horseflesh, moreover, of more than dubious origin, taken from animals that have died of infectious disease, and even that in an advanced state of decomposition. According to the *Tribuna* there has been collusion between certain sausage manufacturing firms and the veterinary authority, the latter winking at frauds which it ought to have exposed. The new powers conferred by the Codice Sanitario, indeed, are finding material for their exercise in quarters hitherto above suspicion —in an industry, to wit, which has long been one of the special boasts of Italy.—*Lancet*, November 16, 1889.

The Radical Cure of Hernia.

At the meeting of the Johns Hopkins Hospital Medical Society, held in Baltimore, October 22, 1889, Dr. Wm. S. Halsted presented five patients upon whom he had performed his operation for the cure of inguinal hernia. He described the operation as follows:

1. The incision begins at the external abdominal ring, and ends one inch or less (less than one inch in children) to the inner side of the anterior superior spine of the ilium on an imaginary line connecting the anterior superior spines of the ilia. Throughout the entire length of the incision everything superficial to the peritoneum is cut through.

2. The vas deferens, with its vessels, is carefully isolated up to the outer termination of the incision, and held aside.

3. The sack is opened and dissected from the tissues which envelop it.

4. The abdominal cavity is closed by quilted sutures passed through the peritoneum at a level higher by 1½–2 inches, than that of the so-called neck of the sack.

5. The vas deferens and its vessels are transplanted to the upper outer angle of the wound.

6. Interrupted, strong silk sutures, passed so as to include everything between the skin and the peritoneum, are used to close the deeper portion of the wound, which is sewed from the crest of the pubes to the upper outer angle of the incision. The cord now lies superficial to these sutures, and emerges through the abdominal muscles about one inch to the inner side of the anterior superior spine of the ilium.

7. The skin is united over the cord by interrupted stitches of very fine silk. These stitches do not perforate the skin, and when tied they become buried. They are taken from the under side of the skin, and made to include only its deep layers—the layers which are not occupied by sabaceous follicles.

Dr. Halsted has for more than two years sewed most of his wounds in this way. The method was suggested to him from his experiments on dogs. He thinks that it is very difficult, and perhaps impossible, to disinfect the skin of a dog, and believes that pyogenic organisms may occasionally be present in the sebaceous follicles of the skin. At any rate, he had repeatedly observed pus in the suture holes of the perforating skin stitches, and could not with any certainty secure primary union of the skin wounds of dogs until he had resorted to this subcutaneous method of sewing the skin. Dr. Halsted remarked in this connection that whether or not it were possible or easy to disinfect absolutely the human skin, he had been much impressed with the fact that skin sutures not infrequently suppurate, even in wounds sewed by the most careful surgeons in this country and abroad. He thought it advisable, therefore, to test for a time the subcutaneous, buried, skin suture.

8. One or two small, short gauze plugs are used as wound drains.

The gauze plugs are removed at the first subsequent dressing—usually at about the

seventh day. The patients are allowed to walk about on the 21st day.—*Johns Hopkins Hospital Bulletin*, December, 1889.

Ainhum, a Brazilian Disease.

Ainhum was first systematically described by a Brazilian surgeon as attacking colored races in Brazil. The merit of its actual discovery, as Dr. Radcliffe Crocker and others have pointed out, is due to Dr. Clarke, who described the disease before the Epidemiological Society in 1860, as a dry gangrene of the little toe among the natives of the Gold Coast. Dr. Da Silva, of Lima, however, described ainhum as a disorder long known as existing amongst Africans and Creoles in South America. Ainhum consists in hypertrophy and degenerative changes in the little toe, a constriction forming and slowly becoming deeper until the digit is amputated spontaneously or otherwise. The disease is often symmetrical and may last for years. It is now known that the fourth, or even the great toe, may be affected, and Egles describes a case where a finger was attacked. It is frequent near Bahia, and also occurs in the Southern States of America, the West Indies, the West Coast of Africa, India (where Hindoos are also liable to the disease), Réunion, and Nossi-bé. The pathology of ainhum is obscure, and although spontaneous amputation of digits is a feature in some forms of leprosy, it is by no means certain that the two diseases are closely allied.—*British Med. Journal*, Nov. 13, 1889.

Chloroform and Locomotor Ataxy.

Dr. Thiem, having had to give a patient with slight signs of locomotor ataxy, chloroform for the purpose of examining an abdominal tumor, was surprised to notice that as she was being helped from the room, while still somewhat under the influence of the chloroform, she walked with a typical ataxic gait, though this symptom was not ordinarily present. On watching other patients who were not suffering from this affection trying to walk while still partially under the influence of chloroform, Dr. Thiem convinced himself that the peculiar gait only occurred in the subjects of ataxia in whom the semi-narcotic state brings out the want of coördination in the movements of the legs. The explanation would appear to be that inasmuch as the peculiar gait is not due to any paralysis of the muscles, but only to the want of coördinating power, which is set in action by the control exerted by the muscular sense and the sense of sight, when, as in the case of a half-chloroformed subject of locomotor ataxy, both the central coördinating apparatus and the peripheral regulating machinery are in a more or less inactive condition, there is a double reason for the existence of the well-known jerking and sliding movements of these patients. It would appear, then, that in doubtful cases of locomotor ataxy some assistance towards a correct diagnosis might sometimes be obtained by partially anæsthetizing the patient and then observing his gait as he walks across the room.—*Lancet*, Nov. 16, 1889.

A New Method of Anti-Rabic Inoculation.

Inspired by the belief of M. Pasteur that the desiccation of spinal cords obtained from animals having died of rabies diminishes the quantity and not the virulence of the rabic poison, M. Hœgyes, of Buda-Pesth, was led to try the effect of simple dilution, and he has successfully carried out seventy vaccinations on this plan without the production of any untoward symptom. He soaks one part of diseased cord in a sterilized solution of sea salt (7 grammes to the litre), the proportion varying from 1 in 10 to 1 in 10,000. The latter dilution does not cause death in the rabbit, but double that strength (1-5,000) will do so, though not invariably. The stronger solutions kill, and each rise in strength corresponds with a shortening of the period of incubation. The author hopes by careful dosage of the virus to obviate the uncertainty which results from using spinal cords of varying dimensions, the process of desiccation upon which the attenuation of the virus depends not being the same in a thick as in a thin cord. Whatever the value may be of these discoveries, they furnish an additional proof that M. Pasteur's method is based on a sure basis of observed facts. By vaccinating animals before infection immunity is, in most instances, conferred against any—even the most powerful—mode of infection. Vaccination *after* infection only protects apparently against the usual mode of transmission, viz., by bites.—*Medical Press and Circular*, Nov. 20, 1889.

Coryza.

The following solution for nasal catarrh is recommended by Professor Leffert, who claims it to be most efficacious:

℞	Acidi carbolici	℈j
	Sodii boratis	ʒj
	Sodii bicarbonatis	ʒj
	Glycerini	fʒj
	Aquæ rosæ	fʒj
	Aquæ, q. s. ad	Oj

M. Sig.: Use as a spray.

Anasarca and Ascites in an Infant.

Dr. James Wright Putnam, of Buffalo, N. Y., reports in the *Buffalo Med. and Surg. Journal*, Dec., 1889, the following case:

A boy, eleven months old, with acute general dropsy. The scalp, hands, arms, legs, and ankles all pitted on pressure. The abdomen was greatly distended with fluid. There was no history of previous ill-health. The bowels moved naturally every day. There was no suppression of urine. There had been no cutaneous trouble. Small powders of jalap and cream of tartar were prescribed. These operated freely, and reduced the edema of the extremities to a marked extent.

The ascites, however, was undiminished, and we accordingly decided to tap. We drew off one pint of fluid, which was straw-colored, and did not differ from the usual ascitic fluid. The child made a complete recovery.

Carbolic Acid in the Treatment of Neuralgia.

Dr. Julius Garst, of the Indian Reservation, Tacoma, Washington Territory, writes to the *New York Medical Journal*, November 30, 1889, that recently a case of severe neuralgia, that had continued about three months, came under his care. The patient had taken the usual tonics, also quinine in large doses, and acetanilide, without relief. The pain was severe in the areas supplied by the infra-orbital, the supra-orbital, the temporo-malar, and the great occiptal nerves, also in a spot a little to the left of the seventh cervical vertebra. There was no tenderness along the spine. Complete relief followed the injection of several drops of a fifty per cent. solution of carbolic acid at the points from which the pain radiated. Two weeks had passed, at the date of Dr. Garst's letter, without any return of the pain, and during that time trinitrin had been taken.

Infantile Diarrhœa.

At a meeting of the Harveian Society of London, held November 7, 1889, and reported in the *Medical Press and Circular*, November 20, 1889, Dr. Luff read a paper on the causation and the treatment of that variety of acute infantile diarrhœa produced by irritative products, resulting from fermentations set up in milk, either previous to or after ingestion. While admitting that though probably several irritating substances resulting from the fermentation of milk are factors in the production of the form of acute infantile diarrhœa under consideration, he contended that the principal share of blame rests with milk or cheese ptomaine tyrotoxicon produced during the fermentation of milk under certain conditions. The treatment of acute infantile diarrhœa, with the view of arresting the abnormal intestinal fermentation was then considered. Carbolic acid, creasote, resorcin, salicylic acid, salicylate of soda, naphthol, and salol have been given in the hope of checking the putrefactive changes in the bowels. Ringer has recommended the administration of a weak solution of bichloride of mercury in infantile diarrhœa attended with very slimy stools. Dr. Luff then referred to Illingworth's antiseptic treatment of infantile diarrhœa, which he had himself found most useful, and the employment of which had first directed his attention to the treatment he had employed. This consists in drug treatment and diet treatment combined. The drug treatment consists in the administration of one-fiftieth of a grain doses of the biniodide of mercury dissolved in iodide of potassium, combined with one grain doses of chloral hydrate. It was shown experimentally that the biniodide of mercury is an extremely soluble and diffusible salt, and that it possesses the property of combining with and rendering insoluble the milk ptomaine tyrotoxicon. As regards the diffusibility of the biniodide of mercury, Dr. Luff has detected it in the urine within two hours of its administration. Dr. Luff had never found that soluble biniodide of mercury itself acts as an intestinal irritant. Of eighty cases of acute infantile diarrhœa treated in this method the diarrhœa ceased within two days in seventy-two of the cases,

in five out of the remaining eight cases it ceased within four days, and in no case did it last over seven days.

Fractures of the Base of the Skull.

Fracture of the base of the skull has been one of those injuries which the surgeon has treated purely upon the expectant plan, and with the conviction that death is sure to follow. This view of the lesion has been entertained for years by hospital surgeons, and there is certainly a consensus of opinion among surgical writers in regard to the prognosis in this injury. All the standard text-books and monographs are in accord in reference to the mortality.

Dr. Frederic S. Dennis, of New York, in an interesting paper on this subject, read before the New York Academy of Medicine, and appearing in the *Medical Record*, November 23, 1889, claims that it is a clinical fact that the great majority of these cases die from causes which can be wholly prevented by the surgeon. There has been but little encouragement to the medical man to attempt any treatment in these cases of basilar fracture, when one reads, as he may, in the latest edition of a large standard work on surgery, "that any treatment directed to the lesion itself is out of the question."

The fractures of the base of the skull may be situated in any of the three fossæ of the cranium. They may be divided into three varieties:

1. Where the fracture involves the anterior fossa, the roof of the orbit, or the nasal cavity.

2. Where the fracture involves the middle and posterior fossæ.

3. Where the fracture involves the posterior fossa.

The first variety is seen in falls upon the forehead, or by an umbrella or cane thrust through the roof of the orbit.

The second and third varieties, where forces act from below, as a fall from a height where the patient strikes upon the tuberosities of the ischium or upon the vertex of the skull.

The signs and symptoms of fracture of the base of the skull slightly vary according to the seat of the injury. There are, however, three signs and symptoms that are nearly always present. These are, first, hemorrhage; second, escape of cerebro-spinal fluid; thirdly, coma. In regard to hemorrhage, the source of it is most important to consider. If the anterior fossa is the seat of fracture, the bleeding occurs from the nose or from the mouth, and usually there is subconjunctival ecchymosis; if the middle and posterior fossæ are involved, the hemorrhage is from the ear and occasionally from the nose. It must be noted that, in cases of non-rupture of the membrana tympani, the blood may escape into the nose and pharynx and enter the stomach. Hemorrhage in such a case may exist but there are no external evidences of it. The first intimation that the surgeon has of the existence of hemorrhage is hematemesis. Absence, therefore, of hemorrhage from the ear or nose is not conclusive evidence of the non-existence of a basilar fracture. On the other hand, the presence of bleeding alone from the ear is not in itself a diagnostic sign of any value as indicative of fracture of the base of the skull.

The escape of cerebro-spinal fluid is a valuable diagnostic sign. Coma is also present in a greater or less degree, according to the severity and the situation of the fracture.

With a view to simplifying the general subject of basilar fractures, Dr. Dennis advances the two following propositions:

First. That fractures of the base of the skull should be considered in the same category as compound fractures of the vertex of the skull or long bones.

Second. That since fractures of the base of the skull possess the same essential characteristics as other compound fractures, they should therefore be treated by the same exact principles of aseptic surgery.

Dr. Dennis answers the first proposition by stating that the entrance of air to the seat of a fracture is a *sine qua non* for the existence of a compound fracture, and that the same applies to basilar fractures, since the air may gain access to the seat of the fracture either through the external auditory meatus, the Eustachian tube, or through the pharynx or nasal cavities. Then again, basilar fracture is associated with hemorrhage, laceration of the nerves, with venous thrombosis, with septic phlebitis, with fat-embolism, with cerebro-spinal shock, with pyemia —in fact, with all the complications that arise in other compound fractures.

The essential features of the treatment should therefore be the same as for any

compound fracture, viz.: Antiseptic cleansing of the wound, immediate immobilization, proper drainage, and permanent fixation. Dr. Dennis then shows how these principles may be applied to basilar fractures. The technique is simple. The patient suffering from fracture of the base of the skull, should be removed to the operating room, and every outside preparation having been made to make the toilet asceptic, the head should be held firmly and the entire scalp shaved, after which it should be thoroughly washed with soap and water, and then irrigated with a 1 to 500 bichloride of mercury solution. Attention should next be directed to the irrigation of the external auditory canal and the nasal cavities. Both of these should be rendered thoroughly aseptic, after which the ears should be packed with iodoform or bichloride gauze and some absorbent cotton plugs placed in the nose. The air can filter through cotton, but microorganisms cannot pass through it. In irrigating the nasal fossæ the surgeon must exercise great care, lest the fluid enter the stomach and produce toxic effects. There remains now only one other possible channel of infection to the seat of fracture, and that is the Eustachian tube. This may carry sepsis to the interior of the cranial cavity in a fracture of the base.

In the ordinary form of fracture of the base, where the membrana tympani is ruptured, the discharges make their exit through the auditory canal. In the exceptional cases where the membrane is not ruptured, the blood, serum, and cerebro-spinal fluid find their way into the nasal cavity and the pharynx, and thus these cases are most exposed to sepsis. If the unruptured membrana tympani is examined in a basilar fracture, the membrane will be puffed out on account of the presence of fluid behind it, and the membrane will have lost its natural lustre. These are the circumstances under which it may be wise to puncture the membrana tympani, and thus allow the blood and the cerebro-spinal fluid to escape through the external auditory canal. The diversion of the discharge from the Eustachian tube into the ear makes it possible to keep the fluids permanently aseptic. Having now rendered the head and all the avenues of approach to the intracranial cavity aseptic, it remains to apply a dressing that will keep these parts permanently free from any source of infection. This object is best accomplished by the use of a cap made of wet loose bichloride gauze or carbolized wool, over which absorbent cotton should be placed and a bandage applied. The cap should completely surround the entire head, cover in the ears, and protect every channel leading down to, and communicating with, the seat of fracture, and the cerebral viscera from the entrance of septic germs. This same dressing should be made from time to time during the repair of the fracture, and under the same strict and rigid rules of antiseptic surgery. The head should be held firmly by some dressing that insures its fixation and keeps the fracture as quiet as possible during the repair.

The practical value of Dr. Dennis's theories is ably demonstrated by the report of a case of severe basilar fracture, which, although accompanied by most unfavorable complications, resulted favorably under the treatment above described.

Nitrous Ether for the Cure of Eczema Inpetiginodes.

Dr. W. H. Sullivan, of Rising Sun, Ind., writes to the *Cincinnati Lancet Clinic*, Dec. 7, describing the curative effect of sweet spirits of nitre upon an eczematous affection of his face and hands. The disease began about ten months ago, and was treated by the most approved methods, without much success.

When about despairing of any good results, Dr. Sullivan was handling some nitrous ether, which was spilled on the affected parts. It produced immediate comfort, relieving the itching and gradually the discharge from the skin ceased. When itching or burning again occurred a thorough application was made of the nitrous ether, and after a lapse of three weeks he describes the results as simply marvelous.

The writer is a physician of forty-one years' standing, a graduate of Transylvania University.

Hygiene and Sunday.

Among the questions treated of at the recent Congresses in Paris, that of the observance of the Sabbath as a day of rest was not the least interesting. The Congress on this subject was presided over by M. Léon Say, who remarked that this rest, which several religions rendered obligatory, is a law of nature, and consequently a law of hygiene,

the excellence of which has long been demonstrated, although it is not to be found in all national codes. The resting on the seventh day is of Biblical origin, and the custom of counting the days by seven was formerly the rule among the most diverse races —in India, as among the Celts, in China as well as in Arabia. Now that hygiene has become a positive science, it confirms the moral and material necessity for a temporary rest on the seventh day. The idea was adopted in principle by all the members of the Congress, which received the patronage of two political celebrities—Mr. Harrison, President of the United States of America, and Mr. Gladstone. In a letter which was read publicly, President Harrison declared that he considered that all workers, whether with the hands or with the head, were in need of rest, which alone can guarantee the general observance of the Sabbath. Mr. Gladstone declared that he attributed his robust health and his longevity to his invariable observance of the Sabbath rest. Several reports were presented to the Congress, and physicians, professors, philosophers, and hygienists are in accord on this point. All, without exception, support for workers of all classes and of all ages a weekly day of rest, which should even be made obligatory. It may here be noted that in 1881 this subject was opened to competition by the Swiss Government for a prize, which was awarded to Dr. Niemeyer, of Leipsic. The subject was brilliantly treated by Dr. Niemeyer, who observed that the Dominical rest is the first commandment of hygiene, which should be followed to obtain a peaceful and continued amelioration of society, and in this respect it is as much a rational institution as a religious one. The following is the summary of the conclusions voted by the great majority of the members of the Congress:—"Rest on Sunday is possible in varying degrees in all industries. Sunday is the day which best suits the employer and employed, both as regards the individual himself and his family, and it is well that the day of rest should be, as much as possible, the same for all. When the Sunday rest is impracticable for certain reasons, it should be replaced by some other day, so that the workman may have fifty-two days' rest in the year as equally divided as possible. This rest permits man to produce considerably more and better work, inasmuch as it contributes to maintain his zeal and to restore his physical forces."—*Lancet*, Nov. 23, 1889.

NEWS.

—The death-rate in New York last week was the lowest ever reached, being only 18.20 per cent. per 1,000 population.

—The Corporation of Dublin has adopted the Infectious Diseases Act, which compels notification of contagious and infectious diseases.

—All the schools in Marlboro, Massachusetts, were closed Dec. 11, owing to the prevalence of diphtheria. Twenty cases have been reported.

—The sum of $800,000 has been bequeathed by the will of the late Mr. J. H. Schoenberger, to found a hospital for incurables at Pittsburgh, Pa.

—Dr. Charles P. Noble has been appointed Surgeon in Charge of the Department for Diseases of Women, at the Northern Dispensary, Philadelphia.

—On November 26 the medical department of the Dartmouth Medical College held its annual commencement. The graduating class numbered twenty-one.

—Dr. Remsen Taylor, the health officer of Long Island City, who has been under investigation for extortion, by the Grand Jury of Queens County, has received an official vindication.

—A Detroit physician, who is dying from necrosis of the frontal bone, is reported to be watching his own case without other professional aid, taking copious notes of the symptoms, etc., as they appear.

—Dr. E. H. Wright, a well-known and highly-respected physician of Georgia, and for many years a subscriber to the MEDICAL AND SURGICAL REPORTER, died at his home, Latilla Bluff, December 4, 1889.

—Professor Thomas Opie, Dean of the College of Physicians and Surgeons, in Baltimore, is reported critically ill from blood poisoning, contracted while performing a surgical operation a few weeks ago.

—Drs. F. S. Powell and R. C. Word, who for many years have been editors of the *Southern Medical Record*, have retired from the editorship, having sold their interest in the *Record* to Dr. D. H. Howell, of Atlanta, Georgia.

—Dr. Hans Virchow, Privatdocent in the University of Berlin, and Prosecutor in the Anatomical Institute, has been raised to the rank of Professor Extraordinarius. Dr. Hans Virchow is a son of the celebrated pathologist.